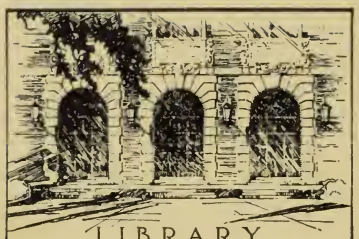

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UNIVERSITY OF CINCINNATI RECORD

SERIES I, VOL. XIII APRIL, 1917 No. 2, PART 2

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1917-1918

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

ISSUED QUARTERLY: JANUARY, APRIL, JULY, OCTOBER.

ENTERED AS SECOND-CLASS MATTER MAY 19, 1913, AT THE POST OFFICE AT CINCINNATI, OHIO, UNDER THE ACT OF AUGUST 24, 1912

DEPARTMENTS OF THE UNIVERSITY

The University comprises the following departments:

GRADUATE SCHOOL,

McMICKEN COLLEGE OF LIBERAL ARTS,

COLLEGE FOR TEACHERS,

COLLEGE OF ENGINEERING,

COLLEGE OF MEDICINE (The Ohio-Miami Medical College and the Clinical and Pathological School of the Cincinnati Hospital),

SCHOOL OF NURSING AND HEALTH,

COLLEGE OF COMMERCE,

SCHOOL OF HOUSEHOLD ARTS.

For special announcement of the Graduate School, address:

THE DIRECTOR OF ADMISSIONS
UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

University of Cincinnati Record

THE GRADUATE SCHOOL

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CALENDAR

1917

Sept. 24, Monday	First registration day for the Graduate School
Sept. 29, Saturday	Last registration day for the Graduate School
Nov. 29, Thursday	Thanksgiving Day: a holiday. Recess of three days

Recess from Monday, December 24, 1917, to Saturday, January 5, 1918, Inclusive

1918

Jan.	7, Monday	Classes resumed
Jan.	28, Monday	First semester examinations begin
Feb.	7, Thursday	First semester examinations end
Feb.	9, Saturday	No classes
Feb.	11, Monday	Registration days for the second semester of the Graduate School
Feb.	12, Tuesday	
Feb.	13, Wednesday	
Feb.	22, Friday	Washington's Birthday: a holiday
March	28, Thursday	Easter recess
March	29, Friday	
March	30, Saturday	
May	3, Saturday	Oratorical Contest for Jones Prizes
May	30, Thursday	Memorial Day: a holiday
June	14, Friday	Second semester ends
June	15, Saturday	University Commencement Day

THE GRADUATE SCHOOL

FACULTY AND INSTRUCTORS

Charles William Dabney, Ph.D., LL.D., President of the University
Jermain Gildersleeve Porter, Ph.D., Director of the Observatory and Professor of Astronomy
Frederick Charles Hicks, Ph.D., Sinton Professor of Economics and Commerce
Harris Hancock, Ph.D., D.Sc., ...Professor of Mathematics
John Miller Burnam, Ph.D., ...Professor of the Classics
Max Poll, Ph.D.,.....Professor of the Germanic Languages
Merrick Whitcomb, Ph.D.,.....Professor of History
Louis Trenchard More, Ph.D.,..Professor of Physics and Dean of the Graduate School
Herman Schneider, Sc.D.,....Thoms Professor of Civil Engineering
Burtis Burr Breese, Ph.D.,.....Professor of Psychology
William Paxton Burris, A.M., L.H.D., Professor of the History and Principles of Education
John William Hall, A.M., .. Professor of Elementary Education
Stephen Elmer Slocum, B.E., Ph.D.,.....Professor of Applied Mathematics
John Theodore Faig, M.E.,..Professor of Mechanical Engineering
Nevin M. Fenneman, Ph.D., Professor of Geology and Geography
Lauder William Jones, Ph.D.,.....Professor of Chemistry
Guy Allan Tawney, Ph.D.,.....Professor of Philosophy
Frank Wadleigh Chandler, Ph.D.,....Professor of English and Ropes Professor of Comparative Literature
Phillip Ogden, Ph.D., ... Professor of Romance Languages
Paul Gerhardt Woolley, B.S., M.D.....Emery Professor of Pathology
Martin H. Fischer, M.D.....Eichberg Professor of Physiology
Henry McElderry Knower, Ph.D.,.....Brunning Professor of Anatomy
Alexander Massey Wilson, M.E.,.....Professor of Electrical Engineering
Harris Miller Benedict, Ph.D.,.....Professor of Botany
Selden Gale Lowrie, Ph.D.,.....Professor of Political Science
William Buchanan Wherry, A.B., M.D., Professor of Bacteriology and Hygiene
Roger S. Morris, A.B., M.D., Forchheimer Professor of Medicine

HERBERT H. BUNZELL, B.S., Ph.D., . . Professor of Bio-Chemistry
WILLIAM JAMES BATTLE, Ph.D., ... Professor of Greek
——— . . . . . Professor of Zoology
——— . . . . . Professor of Secondary Education
HARRY SHIPLEY FRY, Ph.D., ... Associate Professor of Chemistry
SAMUEL JAMES MCINTOSH ALLEN, Ph.D., Associate Professor of Physics
ISAAC JOSLIN COX, Ph.D., ... Associate Professor of History
CLAUDE M. LOTSPEICH, Ph.D., ... Associate Professor of German
HARRY LEWIS WIEMAN, Ph.D., ... Associate Professor of Zoology
HENRY MAX GOETTSCH, Ph.D., Associate Professor of Industrial Chemistry
EDWARD F. MALONE, A.B., M.D., . . Associate Professor of Anatomy
CLYDE WILLIAM PARK, A.M., ... Associate Professor of English
CHARLES NAPOLEON MOORE, Ph.D., Assistant Professor of Mathematics
RALPH EMERSON BASSETT, A.M., Assistant Professor of Romance Languages
BERTHA K. YOUNG, A.M., ... Assistant Professor of English
WILLIAM HAMMOND PARKER, Ph.D., Assistant Professor of Economics and Social Science
CYRUS DEWITT MEAD, Ph.D., . . Assistant Professor of Elementary Education
HENRY G. HARTMAN, Ph.D., ... Assistant Professor of Philosophy
CLARENCE ORAN GARDNER, Ph.D., Assistant Professor of Political Science
CLARENCE D. STEVENS, A.M., ... Assistant Professor of English
ERNEST EDGAR THUM, E.M., ... Assistant Professor of Metallurgy
JAMES DYSART MAGEE, Ph.D., . . Assistant Professor of Economics
FRANK K. SECHRIST, Ph.D., ... Assistant Professor of Education
ROBERT E. CLYDE GOWDY, Ph.D., . . Assistant Professor of Physics
ALBERT WATSON DAVISON, Ph.D., . . Assistant Professor of Physical Chemistry
ORVILLE TURNER WILSON, Ph.D., ... Assistant Professor of Botany
HENRY ROBINSON SHIPHERD, Ph.D., . . Assistant Professor of English
WALTER H. BUCHER, Ph.D., ... Assistant Professor of Geology
OTTO CHARLES VON SCHLICHTEN, A.B., Assistant Professor of Geology
ERNEST LYNN TALBERT, Ph.D., . . . Assistant Professor of Psychology
MERTON JEROME HUBERT, A.M., Assistant Professor of French and Italian
SELBY FRAME VANCE, A.M., D.D., Lecturer on Biblical Literature
*SCHACHNE ISAACS, A.M., ... Instructor in Psychology
REGINALD CHARLES MCGRANE, Ph.D., ... Instructor in History

* Absent on leave 1917-1918.

HUBERTIS MAURICE CUMMINGS, Ph.D., ... Instructor in English
ALAN TOWER WATERMAN, Ph.D., ... Instructor in Physics
EDWARD S. ROBINSON, A.B., ... Assistant in Psychology

ADMINISTRATIVE OFFICERS

ERNEST LYNN TALBERT, Ph.D., .. Director of Admissions and Supervisor of the Evening Academic Courses
Office, 3 McMicken Hall.

JESSE FEIRING WILLIAMS, A.B., M.D., .. Director of the Gymnasium
Gymnasium Building.

DANIEL LAURENCE, B.S., ... Secretary of the University
Office, 4 McMicken Hall.

CHARLES ALBERT READ, A.B., Librarian of the University Library
Van Wormer Library Building.

LELIA GARVIN HARTMAN, B.L., ... Registrar
Office, 7 McMicken Hall.

INFORMATION FOR STUDENTS

ADMISSION

Admission to the Graduate School will be granted to holders of a Bachelor's degree conferred by the University of Cincinnati; or to those who present documentary evidence of having received such a degree from other institutions whose requirements are substantially equivalent.

Admission to the Graduate School does not, however, signify candidacy for an advanced degree. Students will not be admitted to courses after the third week of the semester.

Properly qualified students when duly registered, may be admitted as auditors to courses of study with the approval of the head of the department concerned. No work taken by auditors may under any circumstances be counted towards a degree.

INSTRUCTION

The work of each candidate for a degree shall be under the direction of an Advisory Committee, composed of the Dean and of the heads of departments in which the work is taken.

The unit of instruction is one period a week for one semester.

Graduate students will receive no credit towards a degree of Master of Arts or Doctor of Philosophy for courses which are not of

an advanced character. All courses for which credit is expected must be listed in the catalogue of the Graduate School. Supplementary work must be specified in courses which are intended primarily for advanced undergraduate students; otherwise, but half credit will be allowed.

While the nature of the student's work may vary in the subjects selected, it is understood to require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as "in absentia". No credit will be given towards a graduate degree for work done prior to the conferring of a Bachelor's degree or its equivalent.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

Completion of the requirements for the Master's degree requires at least one full year's residence in the Graduate School. Acceptance in candidacy for the degree of Master of Arts shall be determined by the Advisory Committee not later than the beginning of the last semester of work. When a student's college training has been defective, or when he is registered in a professional school, engaged in teaching, or otherwise occupied so that he can not devote his entire time to his work, the Advisory Committee shall determine how much, if at all, the one year period should be increased.

A student desiring to become a candidate for this degree shall designate the subjects and courses which he elects to study at the time of his admission to the Graduate School, and shall at the same time obtain the approval of his Adviser (the head of the department in which he elects his major work) of his election. The student must then satisfy the Dean of the Graduate School that the courses he has elected have been approved by the heads of departments concerned.

The courses offered for the degree of Master of Arts shall represent not less than twenty-four credit hours of graduate instruction, and at least twelve of them must be in the major subject. In case the candidate elects a major in the same department in which he has completed a major in fulfillment of the requirements for a Bachelor's degree, he may, under the direction of his Adviser, elect sufficient work in some allied department to complete the twelve credit hours.

Each candidate for the Master's degree must present a thesis on a subject approved by his Adviser. The title of this thesis shall be submitted to the Dean at least six months before the degree is conferred. The thesis must be typewritten on regulation paper and be filed with the Registrar before the close of the final semester of graduate study together with a certificate of approval from his

Adviser. The date for submitting the thesis is determined by his Adviser.

Candidates for the degree of Master of Arts are required to pass an oral examination before a committee of the faculty.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY*

For the Doctor's degree, three years of graduate study will ordinarily be required. Where the student's college training has been defective or he cannot devote his whole time to the work, the period of study will be longer than three years. At least the last year of study must be spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is of a satisfactory character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These shall be known as a major and two minor subjects, not more than two of which shall be selected in one department, and the candidate shall satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, shall constitute an Advisory Committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree of Doctor of Philosophy, the candidate must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction, embodied in a major and two minor subjects, thirty units of which must be given to the major subject, and to pass such written examination on his major and minor subjects as the Advisory Committee may indicate. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment.

The candidate shall furthermore be required to present, in such form as the Advisory Committee may determine, a thesis which will give evidence of high attainment and power of independent research, and he shall pass satisfactorily an oral examination before the faculty.

All theses offered for the Doctor's degree must be filed with the

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* Changes which are contemplated in the requirements for the degree of Doctor of Philosophy will be announced before the opening of the fall term.

Registrar not later than six weeks before the close of the final semester of graduate study. Moreover, each student upon whom the degree of Doctor of Philosophy is conferred, is required to deposit in the University Library one hundred printed copies of his thesis. The candidate may receive his diploma before the thesis is printed, provided a type-written copy is deposited with the Librarian and the sum of fifty dollars with the Registrar of the University. This sum will be returned upon presentation to the Library of the required number of printed copies of the thesis.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained through work done in residence at the University of Cincinnati.

SPECIAL ARRANGEMENT FOR GRADUATE STUDENTS IN LANE SEMINARY AND IN THE HEBREW UNION COLLEGE

With the approval of the Dean of the Graduate School and their Advisers, candidates may submit courses taken in Lane Seminary and in the collegiate department of the Hebrew Union College in partial fulfillment of the requirements for the Master of Arts degree. Not more than twelve units may be so counted.

The courses in Hebrew which may be so counted are as follows:

Lane Theological Seminary

3. Old Testament History.—Dr. Farr.
5. The Psalms.—*First semester.* Dr. Farr.
6. The Prophets.—*Second semester.* Dr. Farr.
4. Old Testament Thought.—*First semester.* Dr. Farr.
13. Messianic Prophecy.—*Second semester.* Dr. Farr.

Hebrew Union College

1. Biblical Literature.
2. Rabbinical Literature.
3. Jewish Philosophical Literature.

For detailed description of above courses, see catalogue of the Hebrew Union College.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

THE D. A. R. FELLOWSHIP IN AMERICAN HISTORY. This fellowship was established in 1900 by the Daughters of the American Revolution, and yields an income of $100 per year.

THE HANNA FELLOWSHIP IN PHYSICS. This fellowship was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is $500 a year.

THE ALLIANCE FRANÇAISE SCHOLARSHIP, of $300, was established in 1904 by the Alliance Française of the city of Cincinnati. It is awarded to the student in the Department of Romance Languages showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

THE ARMSTRONG-HUNTER MEMORIAL FUND, valued at $1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund has been used to found a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

In addition to the above, the University offers ten scholarships in several departments which exempt their holders from the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

FEES.

All fees must be paid *in advance* to the Clerk of the Board of Directors during the days of registration. If fees are not paid promptly, the Deans are authorized to exclude students from attendance upon their classes. *No University fees are refunded.*

When the right of a student to register as a citizen of Cincinnati is in doubt, he must raise the question at once with the Registrar, and obtain the blank provided for the purpose. He shall then present his case in writing to the proper authorities who will pass upon the matter. No person can gain residence in Cincinnati by enrolling as a student in the University.

If a student misrepresents himself as a citizen of Cincinnati at the time of registration, he shall be assessed the sum of $10.00 in addition to the tuition for that semester.

TUITION FEES

All non-resident students in the Graduate School shall be charged tuition at the rate of $5.00 per credit hour per semester in advance.

All resident students in the Graduate School shall be charged tuition at the rate of $3.00 per credit hour per semester in advance.

Evening Academic Courses

Tuition in the Evening Academic Courses is free (a) to all citizens of Cincinnati; (b) to all teachers* who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of $5.00 per course, per year. Non-residents, other than teachers, are charged tuition at the rate of $5.00 per credit hour per semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees will be charged for courses in the laboratory sciences.

External Courses

A fee of $5.00 will be charged for admission to each External Course.

Courses for Teachers*

Teachers enrolled in the Graduate School pay the regular library fee of $5.00 per year. Tuition is free (a) to all teachers in public schools who are citizens of the city; (b) to all teachers who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of $5.00 per course, per year, payable in advance.

Laboratory Fees

All laboratory fees are payable strictly *in advance.*

A student shall not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Botany, $10.00 per semester; home and school gardening, $2.50 for the course.

Chemistry, $15.00 per semester; breakage deposit, $10.00.

Geology, $5.00 per semester; $2.50 per semester for a course having but one laboratory period per week.

Metallurgy, $7.50 per semester. (Not paid by students taking chemistry.)

Physics, $10.00 per semester; $5.00 per semester for a course having but one laboratory period per week.

Psychology, $5.00 per semester.

Zoology, $10.00 per semester.

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* Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

Graduation Fees

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of $10.00 is charged a candidate for the degree of Master of Arts, and a fee of $20.00 is charged for the degree of Doctor of Philosophy.

Breakage Deposits

At the beginning of the year, a breakage deposit of $10.00 will be required of each student who takes chemistry. Five dollars of this amount must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining $5.00 a coupon ticket will be issued, with which supplies and apparatus may be obtained at the store-room. Should this coupon-ticket become exhausted, the student must purchase a new ticket ($5.00) before supplies will be issued to him at the store-room.

Miscellaneous Fees

Gymnasium Fee.—A gymnasium fee of $5.00 per annum ($2.50 per semester) will be charged all students in the Graduate School who elect twelve hours of work or more per week. The same fee will be charged all other students who desire to avail themselves of the privileges of the gymnasium and swimming pool.

Contingent Fee.—A contingent fee of $10.00 per annum ($5.00 per semester) is charged all non-resident students in the Graduate School taking twelve hours of work per week; a contingent fee of $5.00 per annum ($2.50 per semester) is charged all non-resident students taking more than six hours but less than twelve.

Library Fee.—All students in the Graduate School must pay a library fee of $5.00 per year at the opening of the session.

Late Registration.—Students who apply for registration or submit schedules of study on days other than those designated will be required to pay a fee of $1.00.

COURSES OF INSTRUCTION

Courses in the Graduate School extend throughout the year, unless designated by "a" (first semester) or "b" (second semester).

ANATOMY

107. Those interested in post-graduate work in anatomy, histology, or gross human anatomy, are requested to apply to the head of the department. Mr. Knower, Dr. Malone.

ASTRONOMY

For Graduates and Undergraduates

An extra amount of computing will be required of graduate students in the following courses:

103. Spherical and Practical Astronomy.—Once a week throughout the year. Mr. Porter.

104. Celestial Mechanics.—Once a week throughout the year. Mr. Porter.

BACTERIOLOGY AND HYGIENE

104. Research.—Open to any qualified person after consultation with the head of the department. Credit according to number of hours elected. Dr. Wherry.

BIBLICAL LITERATURE

110a. Later Prophets.—For graduate credit a thesis will be required on "The Development of Individualism among the Hebrews". *First semester*, T., Th., 11:30-12:30. Mr. Vance.

110b. Wisdom and Apocalyptic Literature.—For graduate credit a thesis will be required on "Apocryphal Apocalyptic Literature". *Second semester*, T., Th., 11:30-12:30. Mr. Vance.

BOTANY

To pursue advanced courses in botany the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in botany students must have completed Courses 1a, 2a, 3b, 4b, 5, 6a, 7a, 8b, 9b, or their equivalents. (See Botany, College of Liberal Arts.) Courses for "Undergraduates and Graduates" may be counted as graduate subjects toward the degree of Master of Arts by students who have elected majors in other departments. When botany is chosen as a minor for the degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in botany. The requirements for a higher degree, when botany is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 8-9).

For Graduates and Undergraduates

A thesis is required of all graduates who enroll in courses open to undergraduates.

106a. Plant Histology.—M., 1:00-2:00. Mr. Wilson.

107a. Plant Histology, Laboratory.—M., 2:00-4:00; W., 1:00-4:00. Mr. Wilson.

108b. Plant Cytology.—M., 1:00-2:00. Mr. Wilson.
Prerequisite: Courses 6a and 7a.

109b. Plant Cytology, Laboratory.—M., 2:00-4:00; W., 1:00-4:00. Mr. Wilson.

110. Special Problems.—The work may be taken as a two or a three-hour course. Mr. Benedict.

Primarily for Graduates

120. Current Problems in Botany.—A reading knowledge of French or German is required. One or two credit hours.
Mr. Benedict.

Prerequisite: Courses 1a, 2a, 3b, 4b, 5, 6a, 7a, 8b, 9b.

121. Research.—Credit according to number of hours elected.
Mr. Benedict.

CHEMISTRY

SPECIAL REQUIREMENTS FOR HIGHER DEGREES

The Degree of Doctor of Philosophy

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject must offer the following courses or their equivalents (see Chemistry, Liberal Arts): 1a, 2a, 3b, 4b, 5a, 6, 7, 8b, 9b, 12a, 13a. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the choice made. The completion of these courses, however, does not satisfy the requirements made of the candidate for a higher degree; he must show a maturity acquired by personal intimacy with the literature and methods of chemistry.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the heads of the departments in which the major work falls. The usual requirements will be Courses 1a, 2a, 3b, 4b, 5a, 6, 7. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) will be required; if one of the biological sciences has been made the major subject, Courses 8b and 9b will be taken.

The Master's Degree

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

For Graduates and Undergraduates

Graduate students who register for courses 110a-128b will be required to complete additional assignments of a more advanced character than those required of undergraduates.

110a. Advanced Inorganic Chemistry.—T., Th., 8:30-9:30.
Mr. Fry.

111. Inorganic Preparations.—Hours to be arranged.
Mr. Fry.

112a. Physical Chemistry.—M., W., F., 8:30-9:30.
Mr. Davison.

113a. Physical Chemistry, Laboratory.—M., T., 1:00-4:00.
Mr. Davison

132b. Electro-Chemistry.—M., W., F., 8:30-9:30.
Mr. Davison.

133b. Electro-Chemistry, Laboratory.—M., T., 1:00-4:00.
Mr. Davison.

134a. Colloid Chemistry.—Three lectures per week.
Mr. Davison.

[141a. Phase Rule.] Two exercises a week. Hours to be arranged. Mr. Davison.

Omitted in 1917-18.

120. Advanced Organic Chemistry.—M., W., F., 10:30-11:30.
Mr. Jones.

121. Advanced Organic Chemistry, Laboratory.—Credit according to number of hours elected. Mr. Jones.

124b. History of Chemistry.—Three exercises per week. Hours to be arranged. Mr. Fry.

[128b. Elementary Spectrum Analysis (Qualitative). Two laboratory periods per week. Hours to be arranged. Mr. Jones.

Omitted in 1917-18.

Primarily for Graduates

130. Research.—Problems for investigation may be chosen from the following: organic chemistry (30a), inorganic chemistry (30b), physical chemistry (30c), or industrial chemistry (30d).

Mr. Jones, Mr. Fry, Mr. Goettsch, Mr. Thum, Mr. Davison.

During the summer of 1917, students engaged in research may enroll in the Graduate School.

135b. Some Special Problems and Theories of Organic Chemistry.—*Second semester.* Two hours a week, to be arranged.
Mr. Jones.

40. Journal Club Meetings.—All students interested in chemistry are invited to attend. Meetings are held fortnightly, and last one hour. Subjects to be discussed are announeed one week in advance.

ECONOMICS

(The Sinton Professorship)

For Graduates and Undergraduates

In the following courses additional reading and reports will be required of graduate students.

[115a. Railroads.] M., W., F., 10:30-11:30. Mr. Magee.
Omitted in 1917-18.

[115b. Tariffs.] M., W., F., 10:30-11:30. Mr. Magee.
Omitted in 1917-18.

116a. Labor.—M., W., F., 10:30-11:30. Mr. Magee.

116b. Money and Banking.—M., W., F., 10:30-11:30. Mr. Magee.

131. Statistics.—M., 5:00-7:00. Mr. Magee.

134a. Railroads.—W., 7:30-9:30. Mr. Magee.

135b. Money and Banking.—W., 7:30-9:30. Mr. Magee.

Primarily for Graduates

111. Elements of Economics.—T., Th., 9:30-10:30 Mr. Hicks.

EDUCATION

For Graduates

Education 103. Secondary Education.—Sec. I, S., 9:30-11:30. ———.

Education 105. Seminar in Secondary Education.—W., 4:00-6:00. ———

Education 107. The Administration of Education.—W., 4:00-5:30. Mr. Burris.

Education 108. The Criticism and Supervision of Instruction.—T., 4:00-5:00. Mr. Hall.

Education 110. Experimental Pedagogy.—Th., 4:00-6:00. Mr. Sechrist.

Education 112. Seminar.—S., 8:30-9:30. Mr. Mead.

Education 114. Seminar.—T., 4:00-6:00. Mr. Mead.

ENGLISH
COMPARATIVE LITERATURE

(The Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates and Upper-Classmen

Additional reading and reports will be required of graduates taking courses open to undergraduates.

107. Old English.—M., W., 11:30-12:30; F., 1:00-2:00. Miss Young.

110. Chaucer and His Period.—M., W., F., 9:30-10:30. Mr. Stevens.

121. English Literature of the Seventeenth Century.—T., Th., 9:30-10:30. Miss Young.

126a. The Essay.—*First semester*, M., W., 1:00-2:00. Mr. Park.

111. The Novel Since the Time of Scott and Hugo.—T., Th., 1:00-2:00. Mr. Stevens.

104. Nineteenth Century Prose.—W., 4:00-6:00. Miss Young.

117. English and American Poetry Since 1890.—For verse-writers and students majoring in English, by permission only.—T., Th., 11:30-12:30. Mr. Cummings.

129. Methods and Materials in Secondary English.—S., 9:30-11:30. Mr. Shipherd.

124. Recent European Drama.—T., Th., 1:00-2:00. Mr. Chandler.

123. Literary Movement of the Eighteenth Century in England, France, and Germany.—T., Th., 2:00-3:00. Mr. Chandler.

112. Literary Composition.—Th., 3:00-5:00. Mr. Shipherd.

Membership in course 112 is strictly limited. Those who wish to register should first submit manuscripts to the instructor for approval.

For Graduates Only

114. Studies in Elizabethan Drama: Seminary.—M., 4:00-6:00 Mr. Stevens.

120. Studies in European Fiction: Seminary.—T., 4:00-6:00. Mr. Chandler.

GEOLOGY AND GEOGRAPHY

For Graduates and Undergraduates

105b. Field Geology and Survey Methods.—Credit according to number of hours elected. Mr. von Schlichten.

*107. Mineralogy.—Two lectures and one laboratory. Additional determination required for graduate credit. T., Th., 10:30-12:30; F., 10:30-11:30. Mr. von Schlichten.

108. Introductory Paleontology.—Additional reading required for graduate credit. M., W., 11:30-12:30; F., 1:00-4:00. Mr. Bucher.

112. Petrology.—Two or three hours, to be announced. ———.

113. Special Work in Geology.—Credit according to number of hours elected.

116. Advanced Physiography of the United States.—Additional papers required for graduate credit. Lec., W., 4:00-6:00; S., 10:30-11:30. Mr. Fenneman.

119. Historical Geology.—Lec., S., 8:30-10:30; field or lab., 10:30-12:30. Additional reading required for graduate credit. Mr. Bucher.

GERMAN

For Graduates and Undergraduates

Additional reading is required of all graduate students who enter courses open to undergraduates.

105. History of German Literature to the Nineteenth Century, with Special Study of the Classic Periods of the Twelfth and Eighteenth Centuries.—M., W., F., 9:30-10:30. Mr. Poll and Assistant.

[106. German Drama of the Nineteenth and Twentieth Centuries.] Th., 4:00-6:00. Mr. Poll.
Omitted in 1917-18.

116. The German Novel of the Nineteenth and Twentieth Centuries.—Th., 4:00-6:00. Mr. Poll.

110. German Composition (Advanced Course).—S., 9:30-11:30. Mr. Poll.

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*Course 1 is not prerequisite to Course 107, but the latter is not accepted as a graduate course for students making geology a major, unless Course 1 or its equivalent has been taken.

[130. Glimpses of German Life and Culture.] S., 9:30-11:30. Omitted in 1917-18. Mr. Poll.

115. Phonetics and Linguistics.—A general introductory course intended for students of all the language departments. W., 4:00-6:00. Mr. Lotspeich.

138. Modern German Literature, Advanced Course.—M., 7:30-9:30. Mr. Poll.

Primarily for Graduates

112. Interpretation of both parts of Faust and Study of the Legend.—Collateral reading and written reports. T., 4:00-6:00. Prerequisite: Course 5. Mr. Poll.

[111b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] *Second semester*, T., 4:00-6:00. Prerequisite: Course 5 or 6. Mr. Poll. Omitted in 1917-18.

Of the three following courses, 107, 108, and 126, one is given each year. Students may express their preference, and upon sufficient demand, a second course will be given at hours to be arranged.

107. Middle High German.—M. or F., 4:00-6:00. Mr. Lotspeich.

108. Gothic and Old High German, with special attention to the development into Modern German.—M. or F., 4:00-6:00. Mr. Lotspeich.

126. Old Norse.—M. or F., 4:00-6:00. Mr. Lotspeich.

[109b. German Seminary.] Willem's *Van den vos Reinaerde. Second semester.* T., 4:00-6:00. Mr. Poll. Omitted in 1917-18.

GREEK

For Graduates and Undergraduates

Additional reading will be required of graduates taking work in courses open to undergraduates.

103. The Drama.—M., W., F., 10:30-11:30. Mr. Battle.

104. Homer.—The Iliad or the Odyssey, with a study of a number of the Homeric problems. Three hours, to be arranged. Mr. Battle

HISTORY

For Graduates and Undergraduates

Graduate students enrolled in mixed courses will be expected to do extra work in order to receive full credit for the course.

102. The Renaissance in Italy and Germany.—T., Th., 9:30-10:30. Mr. Whitcomb.

146. History of Germany.—T., Th., 10:30-11:30. Mr. Whitcomb.

117. Recent American History.—M., W., F., 8:30-9:30 Mr. Cox.

120. Spain and Spanish America.—T., Th., 1:00-2:00. Mr. Cox.

[159. England Since 1815.] T., Th., 11:30-12:30. Omitted in 1917-18. Mr. McGrane.

160. English Diplomacy.—T., Th., 11:30-12:30. Mr. McGrane.

For Graduates

139. Seminary in American History.—T., 4:00-6:00. Mr. Cox.

Note.—Certain courses in Lane Seminary and in the Hebrew Union College will be accepted for credit towards a master's degree. For further information consult the head of the Department of History.

LATIN

For Graduates and Undergraduates

104. Annals of Tacitus and selections from the silver Latin prose writers. Three hours, to be arranged. Additional work must be taken by those who desire graduate credit; in no case may such credits be counted towards the Doctor's degree. Mr. Burnam.

Primarily for Graduates

(Hours in all cases to be arranged)

109. Latin and Romance Palaeography.—Three hours. Mr. Burnam.

Course 9 must be preceded by at least four years of undergraduate work, and requires the ability to read French and German.

110. Latin Seminary.—

110a. Virgil. Three hours.

110b. Caesar. Omitted in 1917-18.

110c. Cicero. Omitted in 1917-18.

The seminary considers Caesar, Cicero, and Virgil, in successive years in the order mentioned. The author to be studied in 1917-18 (Course 10a) is Virgil. Mr. Burnam.

112. Graduate Study.—Credit according to work elected and completed under the direction of the teaching staff of the department.

SANSKRIT

[130. An elementary course in Sanskrit for graduates and undergraduates.] Three hours. Mr. Burnam.
Omitted in 1917-18.

132. A supplementary course for those who have had course 130. Graduates only. Two hours, to be arranged. Mr. Burnam.

MATHEMATICS

For Graduates and Undergraduates

108a. Advanced Integral Calculus.—M., W., F., 9:30-10:30. Additional examples required of graduate students. Mr. Hancock.

109b. Differential Equations.—M., W., F., 9:30-10:30. Mr. Hancock.

[115. Theory of Equations, Including Determinants.] M., W., F., 8:30-10:30. Mr. Hancock.
Omitted in 1917-18.

Primarily for Graduates

119. Applications of Elliptic Integrals.—T., Th., 4:00-6:00. Mr. Hancock.

130. Theory of Numbers, Part I.—Natural Numbers. M., W., 4:00-5:00. Mr. Moore.

MATHEMATICS (APPLIED)

Primarily for Graduates

[126. History and Teaching of Mathematics.] W., 4:00-5:00; F., 4:00-6:00. Mr. Slocum.
Omitted in 1917-18.

111a. Fourier's Series and Spherical Harmonics.—*First semester*, T., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

110b. Theory of Errors and Method of Least Squares.—*Second semester*, T., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

140. Seminary.—Theoretical and experimental research in some special topic of the mechanics of rigid, elastic, fluid, or gaseous bodies. Credit according to number of hours elected. Hours by special arrangement. Mr. Slocum.

MECHANICAL ENGINEERING

M. E. 132. Advanced Experimental Engineering.

PATHOLOGY

108. Research.—Open to any qualified person after consultation with the head of the department. Dr. Woolley

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PHILOSOPHY

For Graduates

While these courses include the undergraduate courses coming at the same hours, they are more intensive than the latter and involve in part another subject-matter.

102a. Logic.—M., W., F., 11:30-12:30. Mr. Tawney.

102b. Theory of Scientific Method.—M., W., F., 11:30-12:30. Mr. Tawney.

[103a. History of Philosophy from the Italian Renaissance to the Time of Kant.] M., W., F., 8:30-9:30.
Omitted in 1917-18.

[103b. History of Modern Philosophy from the Time of Kant.] M., W., F., 8:30-9:30.
Omitted in 1917-18.

104a. History of Philosophy to the Beginning of the Christian Era.—M., W., F., 8:30-9:30. Mr. Hartman.

104b. History of the Philosophy of the Middle Ages.—M., W. F., 8:30-9:30. Mr. Hartman.

105a. Ethics.—

Sec. I, M., W., F., 10:30-11:30. Mr. Tawney.

Sec. II, M., W., 1:00-2:00; F., 2:00-3:00. Mr. Hartman.

105b. Ethical Interpretations—

Sec. I, M., W., F., 10:30-11:30. Mr. Tawney.

Sec. II, M., W., 1:00-2:00; F., 2:00-3:00. Mr. Hartman.

122. Ethics.—M., 7:30-9:30. Mr. Tawney.

108a. Aesthetics, the Theory of Art and the Beautiful.—T., Th., 11:30-12:30. Mr. Hartman.

108b. Aesthetics, the Theory of Art and the Beautiful.—T., Th., 11:30-12:30. Mr. Hartman.

127. Modern Philosophy.—Th., 5:00-7:00. Mr. Hartman.

119. The Philosophy of Kant.—Th., 8:30-10:30. Mr. Hartman.

132. Schopenhauer, Nietzsche, and Bergson.—T., 8:30-10:30. Mr. Tawney.

133. Courses in Jewish Philosophy given in the Hebrew Union College by Dr. Neumark and Dr. Kohler.

PHYSICS

For Graduates and Undergraduates

132a. Philosophy of Science.—T., Th., 11:30-12:30. Mr. More.

132b. Philosophy of Science.—T., Th., 11:30-12:30. Mr. More.

103a. Theoretical Mechanics.—T., Th., S., 11:30-12:30. Mr. Gowdy.

118b. Theory of Electricity and Magnetism.—T., Th., S., 10:30-11:30. Mr. Gowdy.

[119a. Theory of Heat.] T., Th., S., 11:30-12:30. Mr. Gowdy. Omitted in 1917-18.

[115b. Theory of Light.] T., Th., S., 10:30-11:30. Mr. Gowdy. Omitted in 1917-18.

Note.—The above courses may be counted towards fulfilling the requirements of a minor in physics. The courses listed below may be counted for either a major or minor in physics.

108. Advanced Experimental Physics.—Credit according to number of hours elected. Mr. Allen, Mr. More.

110. Seminary.—W., 4:00-6:00. Mr. More.

133a. Discharge of Electricity through Gases.—Twice weekly, hours to be arranged. Mr. Waterman, Mr. Allen.

133b. Discharge of Electricity through Gases.—Twice weekly, hours to be arranged. Mr. Waterman, Mr. Allen.

For Graduates Only

107. Lectures on Theoretical Physics.—Twice weekly. Mr. More.

125a. Theoretical Mechanics.—See under Mathematics 16a. Mr. Slocum.

109. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the Mechanician. Daily. Mr. More, Mr. Allen.

PHYSIOLOGY

(The Joseph Eichberg Professorship)

107. Research.—Open to any qualified person after consultation with the head of the department. Dr. Fischer.

122a. Bio-Chemistry.—*First semester*, M., W., F., 11:30-12:30. Mr. Bunzell.

122a. Bio-Chemistry Laboratory.—*First semester*, M., W., 8:30-11:30; F., 1:00-4:00. Mr. Bunzell.
Prerequisite: Chemistry 8a and 9a.

POLITICAL AND SOCIAL SCIENCE

POLITICAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students will be expected to do a greater amount of reading than

undergraduates, and such additional work as the instructor shall prescribe.

102a. International Law.—M., W., F., 8:30-9:30. Mr. Lowrie.

102b. European Governments.—M., W., F., 8:30-9:30. Mr. Gardner.

[103a. Political Theory.] T., Th., 1:00-2:00. Mr. Gardner. Omitted in 1917-18.

[104b. Political Parties and Elections.] T., Th., 1:00-2:00. Omitted in 1917-18. Mr. Gardner.

106. Public Finance and Taxation.—T., Th., 8:30-9:30. Mr. Lowrie.

111b. Municipal Functions.—M., W., F., 8:30-9:30. Mr. Lowrie.

[116. American Diplomacy.] (See History 16) M., W., F., 8:30-9:30. Mr. Cox. Omitted in 1917-18.

117. Constitutional Law.—T., Th., 11:30-12:30. Mr. Gardner.

[132. Public Finance and Taxation.] T., 7:30-9:30.

Prerequisite: Economics 1. Mr. Lowrie. Omitted in 1917-18.

Primarily for Graduates

125. Seminar in Municipal Government.—M., 4:00-6:00. Mr. Lowrie.

Open to those who have had Courses 11a and 11b, and to others by permission.

126. Research in Municipal Government.—Hours to be arranged. Mr. Lowrie.

Open to those who have taken Courses 11a and 11b, and to others by permission.

SOCIAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students will be expected to do a greater amount of reading than undergraduates, and such additional work as the instructor shall prescribe.

107. Modern Social Theories.—M., W., 10:30-11:30. Mr. Parker.

115. Modern Philanthropy.—M., W., 9:30-10:30. Mr. Parker.

120. Criminals and Delinquents.—T., Th., 10:30-11:30. Mr. Parker.

121. Social Problems.—M., W., 11:30-12:30. Mr. Parker.

122. Seminary.—Credit according to number of hours elected. Mr. Parker.

PSYCHOLOGY

For Graduates and Undergraduates

A theme and additional reading are required of all graduate students who enter courses open to undergraduates.

102a. Experimental Psychology.—M., W., F., 2:00-4:30. Mr. Robinson.

102b. Experimental Psychology.—M., W., F., 2:00-4:30. Mr. Robinson.

109. Mental and Physical Tests.—Laboratory methods. Two credits per semester. T., 3:30-5:30. Mr. Breese, Mr. Robinson.

132. Social Psychology.—M., 5:00-7:00. Mr. Talbert.

121a. Psychology of the Emotions.—S., 9:30-11:30. Mr. Talbert.

121b. Psychology of Primitive Peoples.—S., 9:30-11:30. Mr. Talbert.

Primarily for Graduates

103. Research.—Hours to be arranged. Mr. Breese.

104. Seminar.—A critical study of the most important problems in psychology. Th., 3:00-5:00. Mr. Breese.

ROMANCE LANGUAGES

FRENCH

For Undergraduates and Graduates

Additional reading will be required of graduates taking work in courses open to undergraduates.

104. French Drama in the Seventeenth Century.—T., Th., 9:30-10:30. Mr. Ogden.

105. French Drama in the Nineteenth Century.—W., 1:00-2:00; F., 2:00-3:00. Mr. Hubert.

[110. Old French Readings.] Two credits. Hours to be arranged. Mr. Hubert.
Omitted in 1917-18.

124. The Prose Writers of the Nineteenth Century.—T., 4:00-6:00. Mr. Ogden.

126. Development of the French Drama.—T., Th., 8:30-9:30. Mr. Ogden.

SPANISH

For Undergraduates and Graduates

Additional reading will be required of graduates taking work in courses open to undergraduates.

108. Spanish Literature in the Sixteenth and Seventeenth Centuries.—Th., 3:00-5:00. Mr. Bassett.

[122. The Picaroon Novel.] Th., 3:00-5:00.
Omitted in 1917-18. Mr. Bassett.

Primarily for Graduates

[123. Early Spanish.] Phonology and Inflections. Two credits. Hours to be arranged. Mr. Bassett.
Omitted in 1917-18.

ITALIAN

For Undergraduates and Graduates

In the following course additional reading will be required of graduate students.

116. Italian Literature in the Nineteenth Century.—Two hours to be arranged. Mr. Ogden.

ZOOLOGY

To pursue advanced courses in zoology, the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in zoology, students must have completed Courses 1, 2, 15a, 17b, 18b, 19b, 13a, 14a, 20b, or their equivalents. (See Zoology, College of Liberal Arts.) Courses for "Undergraduates and Graduates" may be counted as graduate subjects with full credit toward the degree of Master of Arts by students who have elected majors in other departments. The requirements for a higher degree, when zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 8-9).

For Graduates and Undergraduates

[110a. Microscopical Technique.] M., W., 1:00-4:00; F., 2:00-5:00. Mr. Wieman.
Omitted in 1917-18.

[110b. Cytology.] M., W., 1:00-4:00; F., 2:00-5:00.
Omitted in 1917-18. Mr. Wieman.

129. Advanced Zoology.—Hours to be arranged. Two or three credits. Mr. Wieman.

Primarily for Graduates

131. Research. Hours to be arranged. Mr. Wieman

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UNIVERSITY OF CINCINNATI RECORD

SERIES I, VOL. XIV APRIL, 1918 No. 2, PART 4

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1918-1919

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

ISSUED QUARTERLY: JANUARY, APRIL, JULY, OCTOBER

ENTERED AS SECOND-CLASS MATTER MAY 19, 1913, AT THE POST OFFICE AT CINCINNATI, OHIO, UNDER THE ACT OF AUGUST 24, 1912

DEPARTMENTS OF THE UNIVERSITY

The University comprises the following departments:

GRADUATE SCHOOL,

McMICKEN COLLEGE OF LIBERAL ARTS,

COLLEGE FOR TEACHERS,

COLLEGE OF ENGINEERING,

COLLEGE OF MEDICINE (The Ohio-Miami Medical College and the Clinical and Pathological School of the Cincinnati Hospital),

SCHOOL OF NURSING AND HEALTH,

COLLEGE OF COMMERCE,

SCHOOL OF HOUSEHOLD ARTS.

For Announcements of the College of Liberal Arts and the Evening Academic Courses, address:

THE DIRECTOR OF ADMISSIONS

UNIVERSITY OF CINCINNATI

University of Cincinnati Record

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

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CINCINNATI, OHIO

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CALENDAR

1918

Sept. 23, Monday	First registration day for the Graduate School
Sept. 28, Saturday	Last registration day for the Graduate School
Nov. 28, Thursday	Thanksgiving Day: a holiday. Recess of three days

Recess from Monday, December 23, 1918, to Saturday, January 4, 1919, Inclusive

1919

Jan. 6, Monday	Classes resumed
Jan. 27, Monday	First semester examinations begin
Feb. 6, Thursday	First semester examinations end
Feb. 8, Saturday	No classes
Feb. 10, Monday Feb. 11, Tuesday Feb. 12, Wednesday	Registration days for the second semester of the Graduate School
Feb. 22, Saturday	Washington's Birthday: a holiday
April 17, Thursday April 18, Friday April 19, Saturday	Easter recess
May 2, Saturday	Oratorical Contest for Jones Prizes
May 30, Friday	Memorial Day: a holiday
June 13, Friday	Second semester ends
June 14, Saturday	University Commencement Day

THE GRADUATE SCHOOL

FACULTY AND INSTRUCTORS

Charles William Dabney, Ph.D., LL.D., . . President of the University
Jermain Gildersleeve Porter, Ph.D., . . Director of the Observatory and Professor of Astronomy
Frederick Charles Hicks, Ph.D., Sinton Professor of Economics and Commerce
Harris Hancock, Ph.D., D.Sc., ... Professor of Mathematics
John Miller Burnam, Ph.D., ... Professor of Latin
Max Poll, Ph.D., ... Professor of the Germanic Languages
Merrick Whitcomb, Ph.D., ... Professor of History
Louis Trenchard More, Ph.D., ... Professor of Physics and Dean of the Graduate School
*Herman Schneider, Sc.D., ... Thoms Professor of Civil Engineering
Burtis Burr Breese, Ph.D., ... Professor of Psychology
William Paxton Burris, A.M., L.H.D., ... Professor of Education
John William Hall, A.M., ... Professor of Education
Stephen Elmer Slocum, B.E., Ph.D., . . Professor of Applied Mathematics
John Theodore Faig, M.E., ... Professor of Mechanical Engineering
Nevin M. Fenneman, Ph.D., . . Professor of Geology and Geography
Lauder William Jones, Ph.D., ... Professor of Chemistry
Guy Allan Tawney, Ph.D., ... Professor of Philosophy
Frank Wadleigh Chandler, Ph.D., ... Professor of English and Ropes Professor of Comparative Literature
Phillip Ogden, Ph.D., ... Professor of Romance Languages
Paul Gerhardt Woolley, B.S., M.D., . . Mary M. Emery Professor of Pathology
Martin H. Fischer, M.D., Joseph Eichberg Professor of Physiology
Henry McElderry Knower, Ph.D., . . Francis Brunning Professor of Anatomy
Alexander Massey Wilson, M.E., . . Professor of Electrical Engineering
Harris Miller Benedict, Ph.D., ... Professor of Botany
†Selden Gale Lowrie, Ph.D., ... Professor of Political Science
William Buchanan Wherry, A.B., M.D., . . Professor of Bacteriology and Hygiene
Roger S. Morris, A.B., M.D., . . Frederick Forchheimer Professor of Medicine
William James Battle, Ph.D., ... Professor of Greek
Alfred Lawrence Hall-Quest, A.M., B.D., ... Professor of Education
——— . . . . . Professor of Zoology
Harry Shipley Fry, Ph.D., ... Associate Professor of Chemistry
Samuel James McIntosh Allen, Ph.D., . . Associate Professor of Physics
Isaac Joslin Cox, Ph.D., ... Associate Professor of History

*Absent on leave.
†In the service of the United States Army.

Claude M. Lotspeich, Ph.D., ... Associate Professor of German
Harry Lewis Wieman, Ph.D., ... Associate Professor of Zoology
Henry Max Goettsch, Ph.D., ... Associate Professor of Industrial Chemistry
Edward F. Malone, A.B., M.D.,.....Associate Professor of Anatomy
Clyde William Park, A.M.,.....Associate Professor of English
Charles Napoleon Moore, Ph.D., Associate Professor of Mathematics
Clarence D. Stevens, A.M.,.....Associate Professor of English
James Dysart Magee, Ph.D.,.....Associate Professor of Economics
Henry G. Hartman, Ph.D.,.....Associate Professor of Philosophy
Ralph Emerson Bassett, A.M., Assistant Professor of Romance Languages
Bertha K. Young, A.M.,.....Assistant Professor of English
*William Hammond Parker, Ph.D.,....Assistant Professor of Economics and Social Science
Cyrus DeWitt Mead, Ph.D.,.....Assistant Professor of Education
Clarence Oran Gardner, Ph.D., Assistant Professor of Political Science
Frank K. Sechrist, Ph.D.,.....Assistant Professor of Education
*Robert E. Clyde Gowdy, Ph.D.,.....Assistant Professor of Physics
*Albert Watson Davison, Ph.D.,.....Assistant Professor of Physical Chemistry
Orville Turner Wilson, Ph.D.,.....Assistant Professor of Botany
Henry Robinson Shipherd, Ph.D.,.....Assistant Professor of English
Walter H. Bucher, Ph.D.,.....Assistant Professor of Geology
Otto Charles von Schlichten, A.B.,....Assistant Professor of Geology
Ernest Lynn Talbert, Ph.D.,.....Assistant Professor of Psychology
Jesse Frederick Steiner, Ph.D.,..Assistant Professor of Social Science
Selby Frame Vance, A.M., D.D., LL.D.,..Lecturer on Biblical Literature
Merton Jerome Hubert, A.M.,....Instructor in French and Italian
Schachne Isaacs, A.M., ... Instructor in Psychology
Reginald Charles McGrane, Ph.D.,.....Instructor in History
Hubertis Maurice Cummings, Ph.D.,.....Instructor in English
*Alan Tower Waterman, Ph.D.,.....Instructor in Physics
E. Lucy Braun, Ph.D., ... Instructor in Botany
Louis A. Passarelli, A.M.,.....Instructor in Romance Languages
Ethel Goldsmith, ... Assistant in Psychology

*In the service of the United States Army.

ADMINISTRATIVE OFFICERS

ERNEST LYNN TALBERT, Ph.D., . . Director of Admissions and Supervisor of the Evening Academic Courses
Office, 2 McMicken Hall.

JESSE FEIRING WILLIAMS, A.B., M.D., ... Director of the Gymnasium
Gymnasium Building.

DANIEL LAURENCE, B.S., ... Secretary of the University
Office, 4 McMicken Hall.

CHARLES ALBERT READ, A.B., ... Librarian of the University Library
Van Wormer Library Building.

LELIA GARVIN HARTMAN, B.L., ... Registrar
Office, 7 McMicken Hall.

INFORMATION FOR STUDENTS

ADMISSION

Admission to the Graduate School will be granted to holders of a Bachelor's degree conferred by the University of Cincinnati, and to those who present documentary evidence of having received such a degree from other institutions whose requirements are substantially equivalent.

Admission to the Graduate School does not, however, signify candidacy for an advanced degree. Students will not be admitted to courses after the third week of the semester.

Properly qualified students, when duly registered, may be admitted as auditors to courses of study with the approval of the heads of the departments concerned. No work taken by auditors may under any circumstances be counted towards a degree.

INSTRUCTION

The work of each candidate for a degree shall be under the direction of an advisory committee, composed of the Dean and of the heads of the departments in which the work is taken.

The unit of instruction is one period a week for one semester.

Graduate students will receive no credit towards a degree of Master of Arts or Doctor of Philosophy for courses which are not of an advanced character. All courses for which credit is expected must be listed in the catalogue of the Graduate School. Supplementary work must be specified in courses which are intended primarily for advanced undergraduate students; otherwise, but half credit will be allowed.

While the nature of the student's work may vary in the subjects selected, it is understood to require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as "in absentia". No credit will be given towards a graduate degree for work done prior to the conferring of a Bachelor's degree or its equivalent.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

Completion of the requirements for the Master's degree requires at least one full year's residence in the Graduate School. Acceptance in candidacy for the degree of Master of Arts shall be determined by the Advisory Committee not later than the beginning of the last semester of work. When a student's college training has been defective, or when he is registered in a professional school, engaged in teaching, or otherwise occupied so that he cannot devote his entire time to his work, the Advisory Committee shall determine how much, if at all, the one-year period should be increased.

A student desiring to become a candidate for this degree shall designate the subjects and courses which he elects to study at the time of his admission to the Graduate School, and shall at the same time obtain the approval of his election from his Adviser (the head of the department in which he elects his major work). The student must then satisfy the Dean of the Graduate School that the courses he has elected have been approved by the heads of the departments concerned.

The courses offered for the degree of Master of Arts shall represent not less than twenty-four credit hours of graduate instruction, of which at least twelve shall be in the major subject. In case the candidate elects a major in the same department in which he has completed a major in fulfillment of the requirements for a Bachelor's degree, he may, under the direction of his Adviser, elect sufficient work in some allied department to complete the twelve credit hours.

Each candidate for the Master's degree must present a thesis on a subject approved by his Adviser. The title of this thesis shall be submitted to the Dean at least six months before the degree is conferred. The thesis must be typewritten on regulation paper and be filed with the Registrar before the close of the final semester of graduate study, together with a certificate of approval from his Adviser. The date for submitting the thesis is determined by the Adviser.

Candidates for the degree of Master of Arts are required to pass an oral examination before a committee of the faculty.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

For the Doctor's degree, three years of graduate study will ordinarily be required. In cases where the student's college training has been defective or he cannot devote his whole time to the work, the period of study will be longer than three years. At least the last year of study must be spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is of a satisfactory character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These shall be known as a major and two minor subjects, not more than two

of which shall be selected in one department, and the candidate shall satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, shall constitute an advisory committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree of Doctor of Philosophy, the candidate must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction, embodied in a major and two minor subjects, thirty units of which must be given to the major subject, and must have passed such written examination on his major and minor subjects as the Advisory Committee may indicate. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment.

The candidate shall furthermore be required to present, in such form as the Advisory Committee may determine, a thesis which will give evidence of high attainment and power of independent research, and he shall pass satisfactorily an oral examination before the faculty.

All theses offered for the Doctor's degree must be filed with the Registrar not later than six weeks before the close of the final semester of graduate study. Moreover, each student upon whom the degree of Doctor of Philosophy is conferred, is required to deposit in the University library one hundred printed copies of his thesis. The candidate may receive his diploma before the thesis is printed, provided a typewritten copy is deposited with the librarian and the sum of $50 with the Registrar of the University. This sum will be returned upon the presentation to the library of the required number of printed copies of the thesis.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained through work done in residence at the University of Cincinnati.

SPECIAL ARRANGEMENT FOR GRADUATE STUDENTS IN LANE SEMINARY AND IN THE HEBREW UNION COLLEGE

With the approval of the Dean of the Graduate School and their Advisers, candidates may submit courses taken in Lane Seminary and in the collegiate department of the Hebrew Union College in partial fulfillment of the requirements for the Master of Arts degree. Not more than twelve units may be so counted.

The courses in Hebrew which may be so counted are as follows:

Lane Theological Seminary

3. Old Testament History.—Dr. Farr.
5. The Psalms.—*First semester.* Dr. Farr.
6. The Prophets.—*Second semester.* Dr. Farr.
4. Old Testament Thought.—*First semester.* Dr. Farr.
13. Messianic Prophecy.—*Second semester.* Dr. Farr.

Hebrew Union College

1. Biblical Literature.
2. Rabbinical Literature.
3. Jewish Philosophical Literature.

For detailed description of above courses, see catalogue of the Hebrew Union College.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

The D. A. R. Fellowship in American History. This fellowship was established in 1900 by the Daughters of the American Revolution, and yields an income of $100 per year.

The Hanna Fellowship in Physics. This fellowship was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is $500 a year.

The Alliance Française Scholarship, of $300, was established in 1904 by the Alliance Française of the city of Cincinnati. It is awarded to the student in the Department of Romance Languages showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

The Armstrong-Hunter Memorial Fund, valued at $1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund has been used to found

a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

In addition to the above, the University offers ten scholarships in several departments which exempt their holders from the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

For the fellowships, scholarships, and prizes of the various colleges, consult their several announcements.

FEES

All fees must be paid *in advance* to the Clerk of the Board of Directors during the days of registration. If fees are not paid promptly, the deans are authorized to exclude students from attendance upon their classes. *No University fees are refunded.*

When the right of a student to register as a citizen of Cincinnati is in doubt, he must raise the question at once with the Registrar, and obtain the blank provided for the purpose. He shall then present his case in writing to the proper authorities who will pass upon the matter. No person can gain residence in Cincinnati by enrolling as a student in the University.

If a student misrepresents himself as a citizen of Cincinnati at the time of registration, he shall be assessed the sum of $10 in addition to the tuition for that semester.

Tuition Fees

All non-resident students in the Graduate School shall be charged tuition at the rate of $5 per credit hour per semester in advance.

All resident students in the Graduate School shall be charged tuition at the rate of $3 per credit hour per semester in advance.

Evening Academic Courses

Tuition in the evening academic courses is free (a) to all citizens of Cincinnati; (b) to all teachers* who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of $5 per course, per year. Non-residents, other than teachers, are charged tuition at the rate of $5 per credit hour per semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees will be charged for courses in the laboratory sciences.

External Courses

A fee of $5 will be charged for admission to *each* external course.

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*Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

Courses for Teachers*

Teachers enrolled in the Graduate School pay the regular library fee of $5 per year. Tuition is free (a) to all teachers in public schools who are citizens of the city; (b) to all teachers who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of $5 per course, per year, payable in advance.

Laboratory Fees

All laboratory fees are payable strictly *in advance.*

A student will not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Botany, $10 per semester; Home and School Gardening, $2.50 for the course.

Chemistry, $15 per semester; breakage deposit, $10.

Geology, $5 per semester; $2.50 per semester for a course having but one laboratory period per week.

Metallurgy, $7.50 per semester. (Not required of students taking chemistry.)

Physics, $10 per semester; $5 per semester for a course having but one laboratory period per week.

Psychology, $5 per semester.

Zoology, $10 per semester.

Graduation Fees

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of $10 is charged a candidate for the degree of Master of Arts, and a fee of $20 is charged for the degree of Doctor of Philosophy.

Breakage Deposits

At the beginning of the year, a breakage deposit of $10 will be required of each student who takes chemistry. Five dollars of this amount must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining $5 a coupon-ticket will be issued, with which supplies and apparatus may be obtained at the storeroom. Should this coupon-ticket become exhausted, the student must purchase a new ticket ($5) before supplies will be issued to him at the storeroom.

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*Librarians or assistants n the Public Library are given the same rates as teachers in the public schools.

Miscellaneous Fees

Gymnasium Fee.—A gymnasium fee of $5 per annum ($2.50 per semester) will be charged all students in the Graduate School who elect twelve hours of work per week.

The same fee will be charged all other students who desire to avail themselves of the privileges of the gymnasium and the swimming pool.

Contingent Fee.—A contingent fee of $10 per annum ($5 per semester) is charged all non-resident students in the Graduate School taking twelve hours of work per week; a contingent fee of $5 per annum ($2.50 per semester) is charged all non-resident students taking more than six hours, but less than twelve.

Library Fee.—All students in the Graduate School must pay a library fee of $5 per year at the opening of the session.

Late Registration.—Students who apply for registration or submit schedules of study on days other than those designated will be required to pay a fee of $1.

COURSES OF INSTRUCTION

Courses in the Graduate School extend throughout the year, unless designated by "a" (first semester) or "b" (second semester).

ANATOMY

107. Those interested in post-graduate work in anatomy, including histology, neurology, embryology, or gross human anatomy, are requested to apply to the head of the department. Mr. Knower, Dr. Malone.

ASTRONOMY

For Graduates and Undergraduates

An extra amount of computing will be required of graduate students in the following courses:

103. Spherical and Practical Astronomy.—Once a week throughout the year. Mr. Porter.

104. Celestial Mechanics.—Once a week throughout the year. Mr. Porter.

BACTERIOLOGY AND HYGIENE

104. Research.—Open to any qualified person after consultation with the head of the department. Credit according to number of hours elected. Dr. Wherry.

BIBLICAL LITERATURE

109a. Eighth Century Prophets.—Amos, Hosea, Micah, Isaiah. For graduate credit a thesis on some assigned topic will be required. *First semester*, Tu., Th., 11:30-12:30. Mr. Vance.

109b. Social Teachings of the Bible.—An inductive study of the social teachings of the Prophets, Sages, and Jesus. For graduate credit a thesis on some assigned topic will be required. *Second semester*, Tu., Th., 11:30-12:30. Mr. Vance.

BIO-CHEMISTRY

122a. Bio-Chemistry.—*First semester,* M., W., F., 11:30-12:30. ———.

122a. Bio-Chemistry Laboratory.—*First semester,* M., W., 8:30-11:30; F., 1:00-4:00. ———.

Prerequisite: Chemistry 8a and 9a.

BOTANY

To pursue advanced courses in botany the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in botany students must have completed Courses 1a, 2a, 3b, 4b, 5, 6, 7, 8, 9, or their equivalents. (See Botany, College of Liberal Arts.) Courses for "Undergraduates and Graduates" may be counted as graduate subjects toward the degree of Master of Arts by students who have elected majors in other departments. When botany is chosen as a minor for the degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in botany. The requirements for a higher degree, when botany is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 00-00).

For Graduates and Undergraduates

A thesis is required of all graduates who enroll in courses open to undergraduates.

106a. Plant Pathology.—The causes, symptoms, and prevention of plant diseases. Lec., Tu., 1:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson.

106b. Bacteriology.—Study of the physiology and morphology of bacteria. Lec., Tu., 1:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson.

116. Plant Histology.—M., 1:30-2:30. Mr. Benedict.

117. Plant Histology, Laboratory.—M., 2:30-4:30; W., 1:30-4:30. Mr. Benedict, Miss Braun.

118. Plant Cytology.—M., 1:30-2:30. Mr. Benedict.

Prerequisite: Courses 6 and 7.

119. Plant Cytology, Laboratory.—M., 2:30-4:30; W., 1:30-4:30. Mr. Benedict.

Primarily for Graduates

120. Current Problems in Botany.—A reading knowledge of French or German is required. One or two credit hours. Mr. Benedict.

Prerequisite: Courses 1a, 2a, 3b, 4b, 5, 6.

121. Research.—Credit according to number of hours elected. Mr. Benedict.

CHEMISTRY

SPECIAL REQUIREMENTS FOR HIGHER DEGREES

The Degree of Doctor of Philosophy

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject must offer the following courses or their equivalents (see Chemistry, Liberal Arts): 1a, 2a, 3b, 4b, 5a, 6, 7, 8b, 9b, 12a, 13a. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the choice made. The completion of these courses, however, does not satisfy the requirements made of the candidate for a higher degree; he must show a maturity acquired by personal intimacy with the literature and methods of chemistry.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the heads of the departments in which the major work falls. The usual minimum requirements will be Courses 1a, 2a, 3b, 4b, 5a, 6, 7. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) will be required; if one of the biological sciences has been made the major subject, Courses 8b and 9b will be taken.

The Master's Degree

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

For Graduates and Undergraduates

Graduate students who register for courses 110a-128b will be required to complete additional assignments of a more advanced character than those required of undergraduates.

110a. Advanced Inorganic Chemistry.—Tu., Th., 8:30-9:30. Mr. Fry.

111. Inorganic Preparations.—Hours to be arranged. Mr. Fry.

112a. Physical Chemistry.—M., W., F., 8:30-9:30. ————.

113a. Physical Chemistry, Laboratory.—M., Tu., 1:30-4:30. ————.

132b. Electro-Chemistry.—M., W., F., 8-30:9:30. ————.

133b. Electro-Chemistry, Laboratory.—M., Tu., 1:30-4:30. ————.

[134a. Colloid Chemistry]. Three lectures per week. Mr. Davison. Omitted in 1918-19.

[141a. Phase Rule.] Two exercises a week. Hours to be arranged. Omitted in 1918-19. Mr. Davison.

120. Advanced Organic Chemistry.—M., W., F., 10:30-11:30. Mr. Jones.

121. Advanced Organic Chemistry, Laboratory.—Credit according to number of hours elected. Mr. Jones.

124b. History of Chemistry.—Three exercises per week. Hours to be arranged. Mr. Fry.

[128b. Elementary Spectrum Analysis (Qualitative).] Two laboratory periods per week. Hours to be arranged. Mr. Jones. Omitted in 1918-19.

Primarily for Graduates

130. Research.—Problems for investigation may be chosen from the following: organic chemistry (130a), inorganic chemistry (130b), physical chemistry (130c), or industrial chemistry (130d). Mr. Jones, Mr. Fry, Mr. Goettsch, Mr. Davison.

During the summer of 1918, students engaged in research may enroll in the Graduate School.

135b. Some Special Problems and Theories of Organic Chemistry.—*Second semester.* Two hours a week, to be arranged. Mr. Jones.

40. Journal Club Meetings.—All students interested in chemistry are invited to attend. Meetings are held fortnightly, and last one hour. Subjects to be discussed are announced one week in advance.

ECONOMICS

(The Sinton Professorship)

For Graduates and Undergraduates

In the following courses additional reading and reports will be required of graduate students.

115a. Railroads.—M., W., F., 9:30-10:30. Mr. Magee.

115b. Tariffs.—M., W., F., 9:30-10:30. Mr. Magee.

[116a. Labor.] M., W., F., 9:30-10:30. Mr. Magee. Omitted in 1918-19.

[116b. Money and Banking.] M., W., F., 9:30-10:30. Mr. Magee. Omitted in 1918-19.

117a. Socialism.—M., W., F., 10:30-11:30. Mr. Hicks.

117b. Trusts.—M., W., F., 10:30-11:30. Mr. Hicks.

131. Statistics.—M., 5:00-7:00. Mr. Magee.

134a. Railroads.—W., 7:30-9:30. Mr. Magee.

135b. Money and Banking.—W., 7:30-9:30. Mr. Magee.

Primarily for Graduates

111. Elements of Economics.—Tu., Th., 9:30-10:30. Mr. Hicks.

[112. History of Economic Theory.] Mr. Hicks.
Omitted in 1918-19.

EDUCATION

Those candidates for graduate degrees who intend to become instructors in education, and those who wish to qualify for supervisory or administrative positions in schools, may elect education as the major subject; other graduate students may elect education as a minor, subject to the approval of the head of the department in which the candidate's major subject is chosen.

Subject to the approval of the instructor in each case, graduate courses in education are open also to teachers who are prepared to pursue such courses in a satisfactory manner, even though such teachers be not candidates for a graduate degree.

A candidate for a graduate degree who elects education as a major subject must have had approved undergraduate courses in education and psychology, and will be required to take Education 101. Beyond these requirements the candidate's elections are subject to the approval of the instructors in education.

101. Philosophy of Education.—The method of philosophy applied in testing theories of education. The implications and applications of significant facts of biology, psychology, sociology, ethics, and logic, will be considered in the effort to reach a consistent formulation of the meaning of education. Tu., 4:00-6:00. Mr. Burris.

102. Projects in Elementary Teaching.—A study of the principles underlying elementary school problem-project attack in the organization of subject-matter and teaching; the development of the movement. Each student will be required to work out in the classroom one or more specific school projects. W., 4:00-6:00. Mr. Hall.

103. Secondary Education.—Function of the high school; programs of study; curriculum making; lesson types; place of high school in American education; the high school teacher; pupil management; educational significance of the various studies.

Sec. I, Tu., 4:00-6:00.

Sec. II, S., 9:30-11:30. Mr. Hall-Quest.

[105. Seminar in Secondary Education.] Alternates with 109a and 109b. Mr. Hall-Quest.

Omitted in 1918-19.

[107. Administration of Education.] The history and present status of the organization and administration of school systems in the United States. Special attention will be given to the progress of reform in school administration during the last quarter century, and to the work of surveys in which methods of scientific measurement have been employed. Th., 4:00-6:00. Mr. Burris.

Alternates with 111.

Omitted in 1918-19.

[108. Criticism and Supervision of Instruction.] Mr. Hall.

Alternates with 102.

Omitted in 1918-19.

109a. Historical Survey of Secondary Education.—The origin and development of present conceptions of the high school; a comparative study of English, French, German, and American secondary schools; the relations of high schools to elementary and higher schools; the American origins of the high school and its relation to the development of American democracy. W., 4:00-6:00. Mr. Hall-Quest.

109b. How to Study and the Supervision of Study.—The method of logical thinking as a basis of teaching and study; types of studying; conditions of studying; individual differences; schemes of supervised study; the technic of studying; a critical survey of the literature on study supervision. W., 4:00-6:00. Mr. Hall-Quest.

110. Experimental Pedagogy.—A survey of experimental work in education; separate topic for each student according to individual interests. Th., 4:00-6:00. Mr. Sechrist.

111. Great Educators.—From time to time this course will be devoted to a critical study of modern educational theories contained in the writings of educators whose influences are felt in current educational opinion and practice. Th., 4:00-6:00. Mr. Burris.

1918-19. Locke and Rousseau.

1920-21. Herbart and Spencer.

1922-23. Froebel and Dewey.

Alternates with 107.

112. Measurement of Results in Education.—Intended for those persons who wish to acquaint themselves with modern methods of giving tests and measuring the results of teaching. Saturday hour for advanced students who have had work in Tuesday class.

Tu., 4:00-6:00; S., 9:30-10:30. Mr. Mead.

ENGLISH
COMPARATIVE LITERATURE

(The Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates and Upper-Classmen

Additional reading and reports will be required of graduates taking courses open to undergraduates.

112. Literary Composition.—Tu., Th., 10:30-11:30. Mr. Shipherd.

Membership in Course 112 is strictly limited. Those who wish to register should first submit manuscripts to the instructor for approval.

107. Old English.—S., 9:30-11:30. Miss Young.

110. Chaucer and His Period.—M., W., F., 9:30-10:30. Mr. Stevens.

144. Studies in Shakespeare.—Tu., 4:00-6:00. Mr. Shipherd.

121. English Literature of the Seventeenth Century.—Tu., Th., 9:30-10:30. Miss Young.

127a. English Drama Since the Restoration.—*First semester*, Th., 4:00-6:00. Mr. Park.

104. Nineteenth Century Prose.—M., W., 11:30-12:30; F., 12:30-1:30. Miss Young.

117. English and American Poetry Since 1890.—Tu., Th., 11:30-12:30. Mr. Cummings.

143. Contemporary European Fiction.—Tu., Th., 9:30-10:30. Mr. Stevens.

122. Foreign Backgrounds of English Literature.—Tu., Th., 2:30-3:30. Mr. Chandler.

124. Recent European Drama.—Tu., Th., 1:30-3:30. Mr. Chandler.

For Graduates Only

120. Theories of Literature: Seminary.—W., 4:00-6:00. Mr. Chandler.

GEOLOGY AND GEOGRAPHY

For Graduates and Undergraduates

105b. Field Geology and Survey Methods.—Credit according to number of hours elected. Mr. von Schlichten.

*107. Mineralogy.—Two lectures and one laboratory. Additional determinations required for graduate credit. Hours to be arranged. Mr. von Schlichten.

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*Course 1 is not prerequisite to Course 107, but the latter is not accepted as a graduate course for students making geology a major, unless Course 1 or its equivalent has been taken.

108. Introductory Paleontology.—Additional reading required for graduate credit. Hours to be arranged. Mr. Bucher.

112. Petrology.—Hours to be arranged. Mr. von Schlichten.

113. Special Work in Geology.—Credit according to number of hours elected.

116. Advanced Physiography of the United States.—Additional papers required for graduate credit. Lec., W., 4:00-6:00; S., 10:30-11:30. Mr. Fenneman.

119. Historical Geology.—Lec., S., 8:30-10:30; field or lab.,10:30-12:30. Additional reading required for graduate credit. Mr. Bucher.

GERMAN

For Graduates and Undergraduates

Additional reading is required of all graduate students who enter courses open to undergraduates.

105. History of German Literature to the Nineteenth Century, with Special Study of the Classic Periods of the Twelfth and Eighteenth Centuries.—M., W., F., 9:30-10:30. Mr. Poll and Assistant.

117. German Drama of the Nineteenth and Twentieth Centuries.—Th., 4:00-6:00. Mr. Poll.

[116. German Novel of the Nineteenth and Twentieth Centuries.] Th., 4:00-6:00. Mr. Poll.
Omitted in 1918-19.

[110. German Composition (advanced course).] S., 9:30-11:30.
Omitted in 1918-19. Mr. Poll.

130. Glimpses of German Life and Culture.—S., 9:30-11:30. Mr. Poll.

115. Phonetics and Linguistics.—A general introductory course intended for students of all the language departments. W., 4:00-6:00. Mr. Lotspeich.

[138. Modern German Literature (advanced course).] M., 7:30-9:30. Mr. Poll.
Omitted in 1918-19.

Primarily for Graduates

112. Interpretation of Both Parts of Faust and Study of the Legend.—Collateral reading and written reports. Tu., 4:00-6:00. Mr. Poll.
Prerequisite: Course 5.

[111b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] *Second semester*, Tu., 4:00-6:00.
Prerequisite: Course 5 or 6. Mr. Poll.
Omitted in 1918-19.

Of the four following courses, 107, 108a, 113b, and 126, one or two will be given each year, according to the preference of the students.

107. Middle High German.—M. or F., 4:00-6:00. Mr. Lotspeich.

108a. Old High German, with Special Attention to the Development into Modern German.—*First semester*, M. or F., 4:00-6:00.
Mr. Lotspeich.

113b. Gothic and Germanic Philology.—*Second semester*, M. or F., 4:00-6:00. Mr. Lotspeich.

126. Old Norse.—M. or F., 4:00-6:00. Mr. Lotspeich.

[109b. German Seminary.] Willem's *Van den vos Reinaerde*. *Second semester*. Tu., 4:00-6:00. Mr. Poll.
Omitted in 1918-19.

GREEK

For Graduates and Undergraduates

Additional reading will be required of graduate students taking work in courses open to undergraduates.

104. Homer.—The Iliad or the Odyssey, with a study of a number of the Homeric problems. Three hours, to be arranged. Mr. Battle.

For Graduates Only

122. New Testament Syntax.—M., 1:30-3:30. Mr. Battle.

123. Conference Course.—Tu., Th., 11:30-12:30. Mr. Battle.

HISTORY

For Graduates and Undergraduates

Graduate students enrolled in mixed courses will be expected to do extra work in order to receive full credit for the course.

166. Medieval Institutions.—Tu., Th., 9:30-10:30. Mr. Whitcomb.

125. European History since 1914.—Tu., Th., 10:30-11:30.
Mr. Whitcomb.

[159. England since 1915.] Tu., Th., 11:30-12:30. Mr. McGrane.
Omitted in 1918-19.

160. English Foreign Policy.—Tu., Th., 11:30-12:30. Mr. McGrane.

117. Recent American History.—M., W., F., 8:30-9:30. Mr. Cox.

120. Spain and Spanish America.—Tu., Th., 1:30-2:30. Mr. Cox.

[116. American Diplomacy.] This course may be counted in part towards a major in political science, as well as in history. M., W., F., 8:30-9:30. Mr. Cox.

Omitted in 1918-19.

For Graduates

139. Seminary in American History.—Tu., 4:00-6:00. Mr. Cox.

Note.—Certain courses in Lane Seminary and in the Hebrew Union College will be accepted for credit towards a master's degree. For further information consult the head of the Department of History.

LATIN

For Graduates and Undergraduates

104. Selections from Seneca and Suetonius or Quintilian.—Three hours, to be arranged. Additional work must be taken by those who desire graduate credit; in no case may such credits be counted towards the Doctor's degree. Mr. Burnam.

For Graduates Only

(Hours in all cases to be arranged)

109. Latin and Romance Palaeography.—Three hours. Mr. Burnam.

Course 109 requires the ability to read French and German.
Prerequisite: Four years of undergraduate Latin.

110. Latin Seminary.—

110a.	Caesar.	Three hours.
110b.	Cicero.	Omitted in 1918-19.
110c.	Virgil.	Omitted in 1918-19.

The seminary considers Caesar, Cicero, and Virgil, in successive years, in the order mentioned. The author to be studied in 1918-19 (Course 110a) is Caesar. Mr. Burnam.

112. Graduate Study.—Credit according to work elected and completed under the direction of the teaching staff of the department.

Attention is called to German 115, General Course in Phonetics and Linguistics.

*SANSKRIT

[130. An elementary course in Sanskrit for graduates and undergraduates.] Three hours, to be arranged. Mr. Burnam.
Omitted in 1918-19.

132. A supplementary course for those who have had course 130. Graduates only. Three hours, to be arranged. Mr. Burnam.
Prerequisite: Course 130 or its equivalent.

MATHEMATICS

For Graduates and Undergraduates

115. Theory of Equations, Including Determinants.—M., W., F., 9:30-10:30. Mr. Hancock.

[108a. Advanced Integral Calculus.] M., W., F., 9:30-10:30. Additional examples required of graduate students. Mr. Hancock.
Omitted in 1918-19.

[109b. Differential Equations.] M., W., F., 9:30-10:30.
Omitted in 1918-19. Mr. Hancock.

Primarily for Graduates

131. Theory of Numbers, Part II.—Algebraic numbers.—Dedekind's Theory. Tu., Th., 4:00-6:00. Mr. Hancock.

128. Theory of Functions of a Complex Variable.—M., W., 4:00-5:00. Mr. Moore.

126. History and Teaching of Mathematics.—W., 4:00-5:00; F., 4:00-6:00. Mr. Slocum.

140. Seminary.—Credit according to number of hours elected. Hours by special agreement. Mr. Slocum.

MATHEMATICS (APPLIED)

Primarily for Graduates

126. History and Teaching of Mathematics.—W., 4:00-5:00; F., 4:00-6:00. Mr. Slocum.

111a. Fourier's Series and Spherical Harmonics.—*First semester*, Tu., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

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*Admission to courses in Sanskrit is by permission only.

110b. Theory of Errors and Method of Least Squares.—*Second semester,* M., 4:00-6:00; W., 11:30-12:30. Mr. Slocum.

116a. Theoretical Mechanics (advanced course).—*First semester,* Tu., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

116b. The Mathematical Theory of Elasticity.—*Second semester,* Tu., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

140. Seminary.—Research in some special topic of applied mathematics or mechanics. Credit according to number of hours elected. Hours by special arrangement. Mr. Slocum.

MECHANICAL ENGINEERING

M. E. 132. Advanced Experimental Engineering.

PATHOLOGY

108. Research.—Open to any qualified person after consultation with the head of the department. Dr. Woolley.

PHILOSOPHY

For Graduates

While these courses include the undergraduate courses coming at the same hours, they are more intensive than the latter and involve in part another subject-matter.

102a. Logic.—M., W., 11:30-12:30; F., 12:30-1:30. Mr. Tawney.

102b. Theory of Scientific Method.—M., W., 11:30-12:30; F., 12:30-1:30. Mr. Tawney.

103a. History of Philosophy from the Italian Renaissance to the Time of Kant.—M., W., F., 8:30-9:30. Mr. Tawney.

103b. History of Modern Philosophy from the Time of Kant.—M., W., F., 8:30-9:30. Mr. Tawney.

[104a. History of Philosophy to the Beginning of the Christian Era.] M., W., F., 8:30-9:30.
Omitted in 1918-19.

[104b. History of the Philosophy of the Middle Ages.] M., W., F., 8:30-9:30.
Omitted in 1918-19.

105a. Ethics.—
Sec. I, M., W., F., 10:30-11:30. Mr. Tawney.
Sec. II, M., W., F., 1:30-2:30. Mr. Hartman.

105b. Ethical Interpretations.—
Sec. I, M., W., F., 10:30-11:30. Mr. Tawney.
Sec. II, M., W., F., 1:30-2:30. Mr. Hartman.

122. Ethics.—M., 7:30-9:30. Mr. Tawney.

108a. Aesthetics, the Theory of Art and the Beautiful.—Tu., Th., 12:30-1:30. Mr. Hartman.

108b. Aesthetics, the Theory of Art and the Beautiful.—Tu., Th., 12:30-1:30. Mr. Hartman.

126. Ancient and Medieval Philosophy.—Th., 5:00-7:00. Mr. Hartman.

120. British Empiricism.—Th., 8:30-10:30. Mr. Hartman.

134. Modern Social Theories.—Tu., 8:30-10:30. Mr. Tawney.

133. Courses in Jewish philosophy given in the Hebrew Union College by Dr. Neumark and Dr. Kohler.

PHYSICS

For Graduates and Undergraduates

[132a. Philosophy of Science.] Tu., Th., 11:30-12:30. Mr. More.
Omitted in 1918-19.

[132b. Philosophy of Science.] Tu., Th., 11:30-12:30. Mr. More.
Omitted in 1918-19.

[103a. Theoretical Mechanics.] Tu., Th., S., 11:30-12:30. Mr. Gowdy.
Omitted in 1918-19.

[118b. Theory of Electricity and Magnetism.] Tu., Th., S., 10:30-11:30. Mr. Gowdy.
Omitted in 1918-19.

119a. Theory of Heat.—Tu., Th., S., 11:30-12-30. Mr. More.

115b. Theory of Light.—Tu., Th., S., 10:30-11:30. Mr. More.

Note.—The above courses may be counted towards fulfilling the requirements of a minor in physics. The courses listed below may be counted for either a major or a minor in physics.

108. Advanced Experimental Physics.—Credit according to number of hours elected. Mr. Allen, Mr. More.

110. Seminary.—W., 4:00-6:00. Mr. More.

133a. Discharge of Electricity through Gases.—Twice weekly, hours to be arranged. Mr. Allen.

133b. Discharge of Electricity through Gases.—Twice weekly, hours to be arranged. Mr. Allen.

FOR GRADUATES ONLY

107. Lectures on Theoretical Physics.—Twice weekly. Mr. More.

125a. Theoretical Mechanics.—See under Mathematics 116a. Mr. Slocum.

109. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the mechanician. Daily. Mr. More, Mr. Allen.

PHYSIOLOGY

(THE JOSEPH EICHBERG PROFESSORSHIP)

107. Research.—Open to any qualified person after consultation with the head of the department. Dr. Fischer.

POLITICAL AND SOCIAL SCIENCE

POLITICAL SCIENCE

FOR GRADUATES AND UNDERGRADUATES

In courses open to both graduates and undergraduates, graduate students will be expected to do a greater amount of reading than undergraduates, and such additional work as the instructor shall prescribe. The courses are open only to graduate students whose major subject is in some other department.

102b. European Governments.—*Second semester*, M., W., F., 11:30-12:30. Mr. Gardner.

103a. Political Theory.—*First semester*, Tu., Th., 1:30-2:30. Mr. Gardner.

104b. Political Parties and Elections.—*Second semester*, Tu., Th., 1:30-2:30. Mr. Gardner.

111b. Municipal Functions.—*Second semester*, M., W., F., 8:30-9:30. Mr. Gardner.

[106. Public Finance and Taxation.] Tu., Th., 8:30-9:30. Omitted in 1918-19. Mr. Lowrie.

[117. Constitutional Law.] Tu., Th., 12:30-1:30. Mr. Gardner. Omitted in 1918-19.

[132. Public Finance and Taxation.] Tu., 7:30-9:30. Mr. Lowrie. Prerequisite: Economics 1. Omitted in 1918-19.

[140. International Law.] Tu., 7:30-9:30. Mr. Lowrie
Omitted in 1918-19.

[125. Seminar in Municipal Government.] M., 4:00-6:00.
Omitted in 1918-19. Mr. Lowrie.

[126. Research in Municipal Government.] Mr. Lowrie.
Omitted in 1918-19.

SOCIAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students will be expected to do a greater amount of reading than undergraduates, and such additional work as the instructor shall prescribe. The courses are open only to graduate students whose major subject is in another department.

115a. Modern Philanthropy.—*First semester,* M., W., F., 9:30-10:30. Mr. Steiner.

115b. Social Survey.—*Second semester,* M., W., F., 9:30-10:30. Mr. Steiner.

118. Social Pathology.—M., W., F., 10:30-11:30. Mr. Steiner.

124a. Immigration and Race.—*First semester,* Tu., Th., 10:30-11:30. Mr. Steiner.

124b. Americanization of Aliens.—*Second semester,* Tu., Th., 10:30-11:30. Mr. Steiner.

122. Seminary.—Training course for social work. Three credit hours. Mr. Steiner.

[107. Modern Social Theories.] M., W., 10:30-11:30.
Omitted in 1918-19. Mr. Parker.

[120. Criminals and Delinquents.] Tu., Th., 10:30-11:30.
Omitted in 1918-19. Mr. Parker.

PSYCHOLOGY

For Graduates and Undergraduates

A theme and additional reading are required of all graduate students who enter courses open to undergraduates.

102a. Experimental Psychology.—M., W., F., 2:00-4:30. Mr. ————.

102b. Experimental Psychology.—M., W., F., 2:30-5:00. Mr. ————.

109. Mental and Physical Tests.—Laboratory methods. Two credits per semester. Tu., 3:30-5:30. Mr. Breese, Mr. ————.

132. Social Psychology.—M., 5:00-7:00. Mr. Talbert.

120a. Psychology of Primitive Peoples.—S., 9:30-11:30. Mr. Talbert.

120b. Psychology of Primitive Peoples.—S., 9:30-11:30. Mr. Talbert.

Primarily for Graduates

103. Research.—Hours to be arranged. Mr. Breese.

104. Seminar.—A critical study of the most important problems in psychology. Th., 3:00-5:00. Mr. Breese.

ROMANCE LANGUAGES

FRENCH

For Graduates and Undergraduates

Additional reading will be required of graduates taking work in courses open to graduates.

104. French Drama in the Seventeenth Century.—Tu., Th., 9:30-10:30. Mr. Ogden.

105. French Drama in the Nineteenth Century.—W., F., 1:30-2:30. Mr. Passarelli.

110. Old French Phonology and Morphology.—Practical exercises. Two credits. Hours to be arranged. Mr. Hubert.

124. The Prose Writers of the Nineteenth Century.—Tu., 4:00-6:00. Mr. Ogden.

126. Development of the French Drama.—Tu., Th., 8:30-9:30. Mr. Ogden.

For Graduates Only

117. Old Provençal.—Hours to be arranged. Mr. Ogden.

SPANISH

For Graduates and Undergraduates

Additional reading will be required of graduates taking work in courses open to undergraduates.

108. Cervantes (Don Quixote) and Calderón.—Th., 4:00-6:00. Mr. Bassett.

[122. Spanish Literature in the Sixteenth and Seventeenth Centuries.] Th., 4:00-6:00. Mr. Bassett.
Omitted in 1918-19.

ITALIAN

For Graduates and Undergraduates

In the following course additional reading will be required of graduate students.

116. Italian Literature in the Nineteenth Century.—Two hours to be arranged. Mr. Passarelli.

ZOOLOGY

To pursue advanced courses in zoology, the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in zoology, students must have completed Courses 1, 2, 5, 17b, 18b, 19b, 13a, 14a, 20b, or their equivalents. (See Zoology, College of Liberal Arts.) Courses for "Undergraduates and Graduates" may be counted as graduate subjects with full credit toward the degree of Master of Arts by students who have elected majors in other departments. The requirements for a higher degree, when zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 8, 9).

For Graduates and Undergraduates

110a. Microscopical Technique.—Tu., Th., 1:30-4:30. Mr. Wieman.

110b. Cytology.—Tu., Th., 1:30-4:30. Mr. Wieman.

129. Advanced Zoology.—Hours to be arranged. Two or three credits. Mr. Wieman.

Primarily for Graduates

131. Research. Hours to be arranged. Mr. Wieman.

132. Seminary.—Reading and discussion of papers in zoological journals. One credit. Tu., 4:30. Mr. Wieman.

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MAY 2 1919

UNIVERSITY OF CINCINNATI RECORD

SERIES I, VOL. XV APRIL, 1919 No. 2, PART 4

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1919-1920

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

ISSUED QUARTERLY: JANUARY, APRIL, JULY, OCTOBER

ENTERED AS SECOND-CLASS MATTER MAY 19, 1913, AT THE POST OFFICE AT CINCINNATI, OHIO, UNDER THE ACT OF AUGUST 24, 1912

DEPARTMENTS OF THE UNIVERSITY

GRADUATE SCHOOL

McMICKEN COLLEGE OF LIBERAL ARTS

COLLEGE FOR TEACHERS

COLLEGE OF ENGINEERING AND COMMERCE

COLLEGE OF MEDICINE

School of Nursing and Health

COLLEGE OF LAW (Cincinnati Law School)

For Announcement of the Graduate School, address:

The Director of Admissions

University of Cincinnati

Cincinnati, Ohio

UNIVERSITY OF CINCINNATI RECORD

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1919-1920

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

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CALENDAR

1919

Sept. 22–27	Registration days for the Graduate School
Nov. 27, Thursday	Thanksgiving Day: a holiday. Recess of three days

CHRISTMAS RECESS

Monday, December 22-Saturday, January 3, Inclusive

1920

Jan. 5, Monday	Classes resumed
Jan. 26–Feb. 5	First semester examinations
Feb. 7, Saturday	No classes
Feb. 9–11	Registration days for the second semester of the Graduate School
Feb. 22, Sunday	Washington's Birthday
Feb. 23, Monday	A holiday
April 1, Thursday April 2, Friday April 3, Saturday	Easter recess
April 30, Friday	Oratorical contest for Jones Prizes
May 30, Sunday	Memorial Day
May 31, Monday	A holiday
June 11, Friday	Second semester ends
June 12, Saturday	University Commencement Day

BOARD OF DIRECTORS

Appointed by the Mayor of Cincinnati

Emil Pollak	January,	1920
Arthur R. Morgan	"	1921
Walter R. Griess, M.D.	"	1922
Erwin O. Straehley, M.D.	"	1923
Sanford Brown	"	1924
David I. Wolfstein, M.D.	"	1925
Otto J. Renner	"	1926
Rufus B. Smith	"	1927
Robert W. Hilton	"	1928

OFFICERS

For the Fiscal Year 1919

Rufus B. Smith	Chairman
Daniel Laurence	Clerk
Christie Wilke	Assistant Clerk

COMMITTEES

Committee on Finance: Messrs. Renner, Pollak, Morgan.

Committee on Real Estate: Messrs. Brown, Morgan, Wolfstein.

Committee on University Buildings and Grounds: Messrs. Pollak, Brown, Straehley.

Committee on Academic Affairs and Observatory: Messrs. Griess, Straehley, Hilton.

Committee on Law and College of Law: Messrs. Renner, Straehley, Smith.

Committee on College of Medicine: Messrs. Wolfstein, Griess, Smith.

Committee on College of Engineering: Messrs. Hilton, Morgan, Straehley.

ADMINISTRATIVE OFFICERS

CHARLES WILLIAM DABNEY, Ph.D., LL.D....President of the University
Office, 10 McMicken Hall

LOUIS TRENCHARD MORE, Ph.D.....Dean of the Graduate School
Office, 20 Cunningham Hall

ERNEST LYNN TALBERT, Ph.D....Director of Admissions and Supervisor of the Evening Academic Courses
Office, 2 McMicken Hall

WHITELAW REID MORRISON, A.M., M.D.....Acting Director of the Gymnasium
Office, Gymnasium Building

DANIEL LAURENCE, B.S.....Secretary of the University
Office, 4 McMicken Hall

*CHARLES ALBERT READ, A.B.....Librarian of the University Library
Office, Van Wormer Library Building

LELIA GARVIN HARTMAN, B.L.....Registrar
Office, 7 McMicken Hall

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*Absent on leave for war service.

FACULTY AND INSTRUCTORS

Charles William Dabney, Ph.D., LL.D....President of the University
Jermain Gildersleeve Porter, Ph.D.....Director of the Observatory and Professor of Astronomy
Frederick Charles Hicks, Ph.D....Sinton Professor of Economics and Commerce
Harris Hancock, Ph.D., Sc.D.....Professor of Mathematics
John Miller Burnam, Ph.D.....Professor of Latin
Max Poll, Ph.D.....Professor of the Germanic Languages
*Merrick Whitcomb, Ph.D.....Professor of History
Louis Trenchard More, Ph.D.....Professor of Physics and Dean of the Graduate School
Herman Schneider, Sc.D.....Thoms Professor of Civil Engineering
Burtis Burr Breese, Ph.D.....Professor of Psychology
William Paxton Burris, A.M., L.H.D.....Professor of Education
John William Hall, A.M.....Professor of Elementary Education
Stephen Elmer Slocum, B.E., Ph.D..Professor of Applied Mathematics
Nevin M. Fenneman, Ph.D.....Professor of Geology and Geography
Guy Allan Tawney, Ph.D.....Professor of Philosophy
Frank Wadleigh Chandler, Ph.D.....Professor of English and Ropes Professor of Comparative Literature
Phillip Ogden, Ph.D.....Professor of Romance Languages
†Paul Gerhardt Woolley, B.S., M.D....Mary M. Emery Professor of Pathology
Martin H. Fischer, M.D.....Joseph Eichberg Professor of Physiology
Henry McElderry Knower, Ph. D.....Francis Brunning Professor of Anatomy
Alexander Massey Wilson, M.E....Professor of Electrical Engineering
Harris Miller Benedict, Ph. D.....Professor of Botany
Selden Gale Lowrie, Ph.D.....Professor of Political Science
William Buchanan Wherry, A.B., M.D.....Professor of Bacteriology and Hygiene
†Roger S. Morris, A.B., M.D.....Frederick Forchheimer Professor of Medicine
William James Battle, Ph.D.....Professor of Greek
Alfred Lawrence Hall-Quest, A.M.....Professor of Education
Harry Shipley Fry, Ph.D.....Professor of Chemistry
Harry Lewis Wieman, Ph.D.....Professor of Zoology
Edward F. Malone, A.B., M.D.....Professor of Histology
Alexander Lewis Jenkins, M.E....Professor of Mechanical Engineering
Albert Prescott Mathews, Ph.D.....Professor of Bio-Chemistry

*Absent on leave, 1919-20.
†Absent on leave for war service.

Samuel James McIntosh Allen, Ph.D..Associate Professor of Physics
Isaac Joslin Cox, Ph.D.....Associate Professor of History
Claude M. Lotspeich, Ph.D.....Associate Professor of German
Henry Max Goettsch, Ph.D.....Associate Professor of Industrial Chemistry
Clyde William Park, A.M.....Associate Professor of English
Charles Napoleon Moore, Ph.D.....Associate Professor of Mathematics
Clarence D. Stevens, A.M.....Associate Professor of English
James Dysart Magee, Ph.D.....Associate Professor of Economics
Henry G. Hartman, Ph.D.....Associate Professor of Philosophy
Clarence Oran Gardner, Ph.D..Associate Professor of Political Science
Ralph Emerson Bassett, A.M.....Assistant Professor of Romance Languages
Bertha K. Young, A.M.....Assistant Professor of English
*William Hammond Parker, Ph.D....Assistant Professor of Economics and Social Science
Frank K. Sechrist, Ph.D.....Assistant Professor of Education
Robert E. Clyde Gowdy, Ph.D.....Assistant Professor of Physics
*Albert Watson Davison, Ph.D.....Assistant Professor of Physical Chemistry
Orville Turner Wilson, Ph.D.....Assistant Professor of Botany
Henry Robinson Shipherd, Ph.D.....Assistant Professor of English
Walter H. Bucher, Ph.D.....Assistant Professor of Geology
Otto Charles von Schlichten, A.B.....Assistant Professor of Geology
Ernest Lynn Talbert, Ph.D.....Assistant Professor of Psychology
*Jesse Frederick Steiner, Ph.D....Assistant Professor of Social Science
Hubertis Maurice Cummings, Ph.D.....Assistant Professor of English
Reginald Charles McGrane, Ph.D.....Assistant Professor of History
Shiro Tashiro, Ph.D.....Assistant Professor of Bio-Chemistry
Selby Frame Vance, A.M., D.D., LL.D..Lecturer on Biblical Literature
Merton Jerome Hubert, A.M.....Instructor in French and Italian
*Schachne Isaacs, A.M.....Instructor in Psychology
Alan Tower Waterman, Ph.D.....Instructor in Physics
E. Lucy Braun, Ph.D.....Instructor in Botany
Louis A. Passarelli, A.M.....Instructor in Romance Language
John C. Donaldson, Ph.B., M.D.....Instructor in Anatomy
Ethel Goldsmith, A.B.....Assistant in Psychology

*Absent on leave for war service.

ADMISSION

Admission to the Graduate School is granted to holders of a Bachelor's degree conferred by the University of Cincinnati, and to those who present documentary evidence of having received such a degree from other institutions whose requirements are substantially equivalent.

Admission to the Graduate School does not, however, signify candidacy for an advanced degree. Students are not admitted to courses after the third week of the semester.

Properly qualified students, when duly registered, may, with the approval of the heads of the departments concerned, be admitted as auditors to courses of study. No work taken by auditors may under any circumstances be counted towards a degree.

FEES AND EXPENSES

All fees must be paid *in advance* to the Clerk of the Board of Directors during the days of registration. If fees are not paid promptly, the deans are authorized to exclude students from attendance upon their classes.

Tuition and fees are not returnable except when withdrawal from the University is caused by sickness or causes entirely beyond the control of the student. Students withdrawing under discipline forfeit all rights to a return of any portion of their fees.

The full amount of tuition and fees shall be returned to students who fail of admission to the University after same have been paid. In other cases refunders, when allowed, shall be in the following proportions:

During first two weeks.....80%
During 3d and 4th weeks 60%
During 5th and 6th weeks 40%
During 7th and 8th weeks 20%

After the eighth week no refunder shall be allowed, but a credit memorandum may be issued for the total amount of the tuition or fees.

When the right of a student to register as a citizen of Cincinnati is in doubt, he must raise the question at once with the Registrar, and obtain the blank provided for the purpose. He shall then present his case in writing to the proper authorities who will pass upon the matter. No person can gain residence in Cincinnati by enrolling as a student in the University.

If a student misrepresents himself as a citizen of Cincinnati at the time of registration, he shall be assessed the sum of $10 in addition to the tuition for that semester.

TUITION FEES

Tuition in the Graduate School is free to residents; non-residents are charged at the rate of $5 per credit hour per semester.

Tuition in the Evening Academic Courses is free (a) to all citizens of Cincinnati; (b) to all teachers* who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of $5 per course per year. Non-residents, other than teachers, are charged tuition at the rate of $5 per credit hour per semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees will be charged for courses in the laboratory sciences.

EXTENSION COURSES

A fee of $5 will be charged for admission to *each* Extension Course.

COURSES FOR TEACHERS*

Teachers enrolled in the Graduate School pay the regular library fee of $5 per year. Tuition is free (a) to all teachers in the public schools who are citizens of the city; (b) to all teachers who, although non-residents, are engaged in teaching in the public schools of the city. All other non-resident teachers are charged tuition at the rate of $5 per course per year, payable in advance.

LABORATORY FEES

All laboratory fees are payable strictly *in advance.*

A student will not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Botany, $10 per semester; Home and School Gardening, $2.50 for the course.

Chemistry, $15 per semester; breakage deposit, $10.

Geology, $5 per semester; $2.50 per semester for a course having but one laboratory period per week.

Metallurgy, $7.50 per semester. (Not required of students taking chemistry.)

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*Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

Physics, $10 per semester; $5 per semester for a course having but one laboratory period per week.

Psychology, $5 per semester.

Zoology, $10 per semester.

GRADUATION FEES

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of $10 is charged a candidate for the degree of Master of Arts, and a fee of $20 is charged for the degree of Doctor of Philosophy.

BREAKAGE DEPOSITS

At the beginning of the year, a breakage deposit of $10 will be required of each student who takes chemistry. Five dollars of this amount must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining $5 a coupon-ticket will be issued, with which supplies and apparatus may be obtained at the storeroom. Should this coupon-ticket become exhausted, the student must purchase a new ticket ($5) before supplies will be issued to him at the storeroom.

Upper classmen must make an additional breakage deposit of $5 at the beginning of the second semester. Students pursuing regular summer courses must make an additional breakage deposit of $5 at the beginning of the summer session.

MISCELLANEOUS FEES

GYMNASIUM

A gymnasium fee of $5 per annum ($2.50 per semester) will be charged all students in the Graduate School who elect twelve hours of work per week.

The same fee will be charged all other students who desire to avail themselves of the privileges of the gymnasium and the swimming pool.

CONTINGENT

A contingent fee of $10 per annum ($5 per semester) is charged all non-resident students in the Graduate School taking twelve hours of work per week; a contingent fee of $5 per annum ($2.50 per semester) is charged all non-resident students taking more than six hours.

LIBRARY

All students in the Graduate School must pay a library fee of $5 per year at the opening of the session.

LATE REGISTRATION

Students who apply for registration or submit schedules of study on days other than those designated will be required to pay a fee of $1.

FELLOWSHIPS, SCHOLARSHIPS AND PRIZES

The D. A. R. Fellowship in American History was established in 1900 by the Daughters of the American Revolution. It yields an income of $100 per year.

The Hanna Fellowship in Physics was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is $500 a year.

The Alliance Française Scholarship, of $300, was established in 1904 by the Alliance Française of the city of Cincinnati. It is awarded to the student in the Department of Romance Languages showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

The Armstrong-Hunter Memorial Fund, valued at $1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund has been used to found a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

The Five Baldwin Fellowships, each amounting to $300 in addition to free tuition, have been provided by the Francis Howard Baldwin bequest. They may be awarded in any department in the Graduate School. Full-time candidates for the degree of Doctor of Philosophy are given preference. For further information apply to the Dean of the Graduate School.

In addition to the above, the University offers ten scholarships in several departments which exempt their holders from the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

For the fellowships, scholarships, and prizes of the various colleges, consult their several Announcements.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

Completion of the requirements for the Master's degree requires at least one full year's residence in the Graduate School. Acceptance in candidacy for the degree of Master of Arts shall be determined by the Advisory Committee not later than the beginning of the last semester of work. When a student's college training has been defective, or when he is registered in a professional school, engaged in teaching, or otherwise occupied so that he cannot devote his entire time to his work, the Advisory Committee shall determine how much, if at all, the one-year period should be increased.

A student desiring to become a candidate for this degree shall designate, at the time of his admission to the Graduate School, the subjects and courses which he elects to study, and shall at the same time obtain the approval of his election from his Adviser (the head of the department in which he elects his major work). The student must then satisfy the Dean of the Graduate School that the courses he has elected have been approved by the heads of the departments concerned.

The courses offered for the degree of Master of Arts shall represent not less than twenty-four credit hours of graduate instruction, of which at least twelve shall be in the major subject. In case the candidate elects a major in the same department in which he has completed a major in fulfillment of the requirements for a Bachelor's degree, he may, under the direction of his Adviser, elect sufficient work in some allied department to complete the twelve credit hours. No credit is given for a course in which the student does not receive a record of "Satisfactory."

Each candidate for the Master's degree must present a thesis on a subject approved by his Adviser. The title of this thesis shall be sub-

mitted to the Dean at least six months before the degree is conferred. The thesis must be typewritten on regulation paper and be filed with the Registrar before the close of the final semester of graduate study, together with a certificate of approval from the student's Adviser. The date for submitting the thesis is determined by the Adviser.

Candidates for the degree of Master of Arts are required to pass an oral examination before a committee of the faculty.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

For the Doctor's degree three years of graduate study will ordinarily be required. In cases where the student's college training has been defective or he cannot devote his whole time to the work, the period of study will be longer than three years. At least the last year of study must be spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is of a satisfactory character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These shall be known as a major and two minor subjects, not more than two of which shall be selected in one department. The candidate shall satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, shall constitute an advisory committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree he must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction embodied in a major and two minor subjects, thirty units of which must be given to the major subject, and must have passed such written examination on his major and minor subjects as the Advisory Committee may indicate. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment. No credit is given for a course in which the student does not receive a record of "Satisfactory."

The candidate shall furthermore be required to present, in such form as the Advisory Committee may determine, a thesis which will give evidence of high attainment and power of independent research, and he shall pass satisfactorily an oral examination before the faculty.

All theses offered for the Doctor's degree must be filed with the Registrar not later than six weeks before the close of the final semester of graduate study. Moreover, each student upon whom the degree of Doctor of Philosophy is conferred, is required to deposit in the University library one hundred printed copies of his thesis. If the thesis is published in a journal approved by the candidate's advisory committee, ten printed copies may be deposited in the library. The candidate may receive his diploma before the thesis is printed, provided a typewritten copy is deposited with the Librarian and the sum of $50 with the Registrar of the University. This sum will be returned upon the presentation to the library of the required number of printed copies of the thesis.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained through work done in residence at the University of Cincinnati.

INSTRUCTION

The work of each candidate for a degree shall be under the direction of an advisory committee, composed of the Dean and of the heads of the departments in which the work is taken.

The unit of instruction is one period a week for one semester.

Graduate students will receive no credit towards a degree of Master of Arts or Doctor of Philosophy for courses which are not of an advanced character. All courses for which credit is expected must be listed in the catalogue of the Graduate School. Supplementary work must be specified in courses which are intended primarily for advanced undergraduate students; otherwise, but half credit will be allowed.

While the nature of the student's work may vary in the subjects selected, it is understood to require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as "in absentia." No credit will be given towards a graduate degree for work done prior to the conferring of a Bachelor's degree or its equivalent.

SPECIAL ARRANGEMENTS

With the approval of the Dean of the Graduate School and their Advisers, candidates may submit the following courses taken in the Lane Theological Seminary and in the collegiate department of the Hebrew Union College in partial fulfillment of the requirements for the Master of Arts degree. Not more than twelve units may be so counted.

LANE THEOLOGICAL SEMINARY

3. Old Testament History.—Dr. Farr.
5. The Psalms.—*First semester.* Dr. Farr.
6. The Prophets.—*Second semester.* Dr. Farr.
4. Old Testament Thought.—*First semester.* Dr. Farr.
13. Messianic Prophecy.—*Second semester.* Dr. Farr.

HEBREW UNION COLLEGE

1. Biblical Literature.
2. Rabbinical Literature.
3. Jewish Philosophical Literature.

For detailed description of above courses, see catalogue of the Hebrew Union College.

COURSES OF INSTRUCTION

Courses in the Graduate School extend throughout the year, unless designated by "a" (first semester) or "b" (second semester).

ANATOMY

Facilties are at hand for graduate students electing work in gross human anatomy, histology, neurology, or embryology from a comparative standpoint. Drs. Knower, Malone, Donaldson.

Any of the regular anatomical courses (see Announcement of College of Medicine) are open to undergraduate or graduate students of the University who can show the necessary preliminary preparation and who desire *credits in these subjects towards degrees other than the medical degree.* Applicants should first consult the deans of the faculties supervising their other work. Those interested in research or other special work in anatomy are requested to apply to the Professor of Anatomy.

ASTRONOMY

For Graduates and Undergraduates

An extra amount of computing will be required of graduate students in the following courses:

103. Spherical and Practical Astronomy.—Once a week throughout the year. Mr. Porter.

104. Celestial Mechanics.—Once a week throughout the year. Mr. Porter.

BACTERIOLOGY AND HYGIENE

104. Research.—Open to any qualified person after consultation with the head of the department. Credit according to number of hours elected. Dr. Wherry.

BIBLICAL LITERATURE

112. Social Teachings of the Bible.—An inductive study of the social teachings of the Prophets, Sages, and Jesus. For graduate credit a thesis on some assigned topic will be required. Tu., Th., 11:30-12:30. Mr. Vance.

BIO-CHEMISTRY

Primarily for Graduates

104b. Advanced Bio-Chemistry.—Lecture course. Continuation course for medical and graduate students. Fifteen hours. One credit hour.
Mr. Mathews.

105b. Advanced Bio-Chemistry.—Laboratory course. Quantitative methods of bio-chemical analysis of urine, blood, and tissues. Six or 12 hours a week. Two, 3, or 6 credit hours.
Mr. Mathews, Mr. Tashiro, Mr. Mills.

Prerequisite: Courses 1 and 2 or equivalent.

106. Physico-Chemical Methods of Bio-Chemistry.—Conferences and laboratory 6 or 12 hours a week. Three or 6 credit hours.
Mr. Tashiro.

107. Research. Mr. Mathews, Mr. Tashiro.

108. Seminar.—Open to graduate and medical students. Fifteen hours. One credit hour. Department Staff.

109. Microchemical Methods.—For studying cell respiration. Three or 6 credit hours. Mr. Tashiro.

BOTANY

To pursue advanced courses in botany the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in botany, students must have completed Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18, or their equivalents. (See Announcement of the College of Liberal Arts.) Courses "For Undergraduates and Graduates" may be counted as graduate subjects towards the degree of Master of Arts by students who have elected majors in other departments. When botany is chosen as a minor for the degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in botany. The requirements for a higher degree, when botany is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 13, 14).

For Graduates and Undergraduates

A thesis is required of all graduates who enroll in courses open to undergraduates.

105. Systematic Botany.—One lecture with one laboratory or field period of work per week on the local plants. Hours to be arranged.
Prerequisite: Courses 1 and 2. Miss Braun.

106a. Plant Pathology.—The causes, symptoms, and prevention of plant diseases. Lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson.

106b. Bacteriology.—Study of the physiology and morphology of bacteria. Lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson.

116a. Plant Histology.—Lec., M., 1:00-2:00; lab., M., W., 1:00-4:00.
Prerequisite: Two years' work in botany. Mr. Beghtel.

116b. Plant Cytology.—Lec., M., 1:00-2:00; lab., M., W., 1:00-4:00.
Prerequisite: Course 116a. Mr. Beghtel.

117. Special Problems.—One, two, or three credits. Hours to be arranged. Instructor according to problem chosen.
Prerequisite: Three years' work in botany.

118. Plant Physiology.—Open to Seniors and graduate students in botany. Three lectures per week. Hours to be arranged. Mr. Benedict.

Primarily for Graduates

120. Current Problems in Botany.—Reviews of recent researches. One or two credit hours. Mr. Benedict.
Prerequisite: Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18.

121. Research.—Credit according to number of hours elected.
Mr. Benedict, Mr. Wilson.

CHEMISTRY

SPECIAL REQUIREMENTS FOR HIGHER DEGREES

The Degree of Doctor of Philosophy

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject must offer the following courses or their equivalents (see Announcement of the College of Liberal Arts): 1a, 2a, 3b, 4b, 5a, 6, 7, 8b, 9b, 12a, 13a. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the choice made. The completion of these courses, however, does not satisfy the requirements made of the candidate for a higher degree; he must show a maturity acquired by personal intimacy with the literature and methods of chemistry.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the heads of the departments in which the major work falls. The usual minimum requirements are Courses 1a, 2a, 3b, 4b, 5a, 6, 7. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) are required; if one of the biological sciences has been made the major subject, Courses 8b and 9b are taken.

The Degree of Master of Arts

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

For Graduates and Undergraduates

Graduate students who register for courses 110a-124b are required to complete additional assignments of a more advanced character than those required of undergraduates.

110a. Advanced Inorganic Chemistry.—Tu., Th., 8:30-9:30. Mr. Fry.

111. Inorganic Preparations.—Hours to be arranged. Mr. Fry.

112a. Physical Chemistry.—M., W., F., 8:30-9:30. Mr. Rolle.

113a. Physical Chemistry, Laboratory.—Th., F., 1:00-4:00. Mr. Rolle.

132b. Electro-Chemistry.—M., W., F., 8:30-9:30. Mr. Rolle.

133b. Electro-Chemistry, Laboratory.—Th., F., 1:00-4:00. Mr. Rolle.

134a. Colloid Chemistry.—Three lectures per week. Hours to be arranged. Mr. Oesper.

128. Ultimate Organic Analysis.—Hours to be arranged. Mr. Oesper.

[141a. Phase Rule.] Two exercises per week. Hours to be arranged. Omitted in 1919-20. Mr. Davison.

120. Advanced Organic Chemistry.—M., W., 9:30-10:30. Mr. Farnau, Mr. Rolle.

121. Advanced Organic Chemistry, Laboratory.—Credit acocrding to number of hours elected. Mr. Farnau, Mr. Rolle.

124b. History of Chemistry.—Three exercises per week. Hours to be arranged. Mr. Fry.

PRIMARILY FOR GRADUATES

130. Research.—Problems for investigation may be chosen from the following: organic chemistry (130a), inorganic chemistry (130b), physical chemistry (130c), or industrial chemistry (130d).
Mr. Fry, Mr. Goettsch, Mr. Oesper, Mr. Farnau.

During the summer of 1919 students engaged in research may enroll in the Graduate School.

40. Journal Club Meetings.—All students interested in chemistry are invited to attend. Meetings are held fortnightly, and last one hour. Subjects to be discussed are announced one week in advance.

ECONOMICS

(The Sinton Professorship)

FOR GRADUATES AND UNDERGRADUATES

In the following courses additional reading and reports will be required of graduate students.

111. Elements of Economics.—Tu., Th., 3:00-4:00. Mr. Hicks.

113. Development of Economic Institutions.—*First semester,* M., F., 3:00-4:00. Mr. Hicks.

114. Economic Policies in their Relation to Distribution.—*Second semester,* M., F., 3:00-4:00. Mr. Hicks.

[115. Railroads.] M., W., F., 9:30-10:30. Mr. Magee.
Omitted in 1919-20.

[118. Tariffs.] M., W., F., 9:30-10:30. Mr. Magee.
Omitted in 1919-20.

116. Labor.—*First semester,* M., W., F., 9:30-10:30. Mr. Magee.

119. Money and Banking.—*Second semester,* M., W., F., 9:30-10:30. Mr. Magee.

117. Socialism.—*First semester,* Tu., Th., 2:00-3:00. Mr. Hicks.

120. Trusts.—*Second semester,* Tu., Th., 2:00-3:00. Mr. Hicks.

121. Seminary.—W., 2:00-4:00. Mr. Hicks, Mr. Magee.

131. Statistics.—M., 5:00-7:00. Mr. Magee.

PRIMARILY FOR GRADUATES

112. History of Economic Theory.—Twice weekly, hours to be arranged. Mr. Hicks.

122. Government Regulation of Industry.—Tu., Th., 11:30-12:30. Mr. Magee.

123. Research.—Credit according to number of hours elected.
Mr. Hicks, Mr. Magee.

ENGLISH

COMPARATIVE LITERATURE

(Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates and Upper Classmen

Additional reading and reports are required of graduates taking courses open to undergraduates.

112. Literary Composition.—Tu., Th., 10:30-11:30. Mr. Shipherd.

Membership in Course 112 is strictly limited. Those who wish to register should first submit manuscripts to the instructor for approval.

147. History of the English Language.—W., 4:00-6:00. Mr. Lotspeich.

German 115. Phonetics and Linguistics.—M., 4:00-6:00. Mr. Lotspeich.

110. Chaucer and His Period—S., 9:30-11:30. Mr. Stevens.

144. Studies in Shakespeare.—Tu., 4:00-6:00. Mr. Shipherd.

121. English Literature of the Seventeenth Century.—Tu., Th., 9:30-10:30. Miss Young.

126a. The Essay.—*First semester,* Th., 4:00-6:00. Mr. Park.

104. Nineteenth Century Prose.—M., W., 11:30-12:30. Miss Young.

117. Recent English and American Poetry.—Tu., Th., 11:30-12:30. Mr. Cummings.

143. Contemporary European Fiction.—Tu., Th., 10:30-11:30. Mr. Stevens.

130. Types of Comic Literature.—Tu., Th., 2:00-3:00. Mr. Chandler.

124. Recent European Drama.—Tu., Th., 1:00-2:00. Mr. Chandler.

For Graduates Only

120. Theories of Literature: Seminary.—M., 4:00-6:00. Mr. Chandler.

EDUCATION

Those candidates for graduate degrees who intend to become instructors in education, and those who wish to qualify for supervisory or administrative positions in schools, may elect education as the major subject; other graduate students may elect education as a minor, subject to the approval of the head of the department in which the candidate's major subject is chosen.

Subject to the approval of the instructor in each case, graduate courses in education are open also to teachers who are prepared to pursue such courses in a satisfactory manner, even though such teachers be not candidates for a graduate degree.

A candidate for a graduate degree who elects education as a major subject must have had approved undergraduate courses in education and psychology, and will be required to take Education 101. Beyond these requirements the candidate's elections are subject to the approval of the instructors in education.

101. Philosophy of Education.—The method of philosophy applied in testing theories of education. The implications and applications of significant facts of biology, psychology, sociology, ethics, and logic, are considered in the effort to reach a consistent formulation of the meaning of education. Tu., 4:00-6:00. Mr. Burris.

[102. Projects in Elementary Teaching.] W., 4:00-6:00. Mr. Hall.
Alternates with Course 108.
Omitted in 1919-20.

103. Secondary Education.—Function of the high school; programs of study; curriculum making; lesson types; place of high school in American education; the high school teacher; pupil management; educational significance of the various studies. Tu., 4:00-6:00. Mr. Hall-Quest.

104. The Problems of English in the Secondary School.—A consideration of the principles underlying courses in oral and written composition and literature. S., 8:30-10:30. Mr. Hall-Quest.

105. Seminar in Secondary Education.—Special problems in the psychology of supervision of study. Open only to those students who have studied psychology and who have completed Education 103 or its equivalent. W., 4:00-6:00. Mr. Hall-Quest.

107. Administration of Education.—The history and present status of the organization and administration of school systems in the United States. Special attention is given to the progress of reform in school

administration during the last quarter century, and to the work of surveys in which methods of scientific measurement have been employed. W., 4:00-6:00. Mr. Burris.

Alternates with Course 112.

108. Criticism and Supervision of Instruction. Mr. Hall.
Alternates with Course 102.

[109a. Historical Survey of Secondary Education.] W., 4:00-6:00.
Alternates with Course 105. Mr. Hall-Quest.
Omitted in 1919-20.

[109b. How to Study and the Supervision of Study.] W., 4:00-6:00.
Alternates with Course 105. Mr. Hall-Quest.
Omitted in 1919-20.

[110. Experimental Pedagogy.] W., 4:00-6:00. Mr. Sechrist.
Omitted in 1919-20.

111. Great Educators.—From time to time this course will be devoted to a critical study of modern educational theories contained in the writings of educators whose influences are felt in current educational opinion and practice. Th., 4:00-6:00. Mr. Burris.

1919-20. Herbart and Spencer.

1920-21. Froebel and Dewey.

1921-22. Locke and Rousseau.

[112. Measurement of Results in Education.] W., 4:00-6:00.
Alternates with Course 107. Mr. Burris.
Omitted in 1919-20.

GEOLOGY AND GEOGRAPHY

For Graduates and Undergraduates

105b. Field Geology and Survey Methods.—Hours and amount of credit to be arranged by agreement with each student.
Mr. von Schlichten.

*107. Mineralogy.—Two lectures and one laboratory period. Additional determinations required for graduate credit. Hours to be arranged.
Mr. von Schlichten.

108. Introductory Paleontology.—Additional reading required for graduate credit. Hours to be arranged. Mr. Bucher.

112. Petrology.—Hours and amount of credit to be arranged.
Mr. von Schlichten.

113. Special Work in Geology.—Credit according to number of hours elected.

116. Advanced Physiography of the United States.—Additional papers required for graduate credit. Lec., W., 4:00-6:00; S., 10:30-11:30.
Mr. Fenneman.

119. Historical Geology.—Lec., S., 8:30-10:30; field or lab., 10:30-12:30. Additional reading required for graduate credit. Mr. Bucher.

GERMAN

For Graduates and Undergraduates

Additional reading is required of all graduate students who enter courses open to undergraduates.

105. History of German Literature to the Nineteenth Century.—Special study of the classic periods of the twelfth and eighteenth centuries. M., W., F., 10:30-11:30. Mr. Poll.

[117. German Drama of the Nineteenth and Twentieth Centuries.] Th., 4:00-6:00. Mr. Poll.
Omitted in 1919-20.

[116. German Novel of the Nineteenth and Twentieth Centuries.] Th., 4:00-6:00. Mr. Poll.
Omitted in 1919-20.

[110. German Composition (advanced course).] S., 9:30-11:30.
Omitted in 1919-20. Mr. Poll.

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*Course 1 is not prerequisite to Course 107, but the latter is not accepted as a graduate course for students making geology a major, unless Course 1 or its equivalent has been taken.

[130. Glimpses of German Life and Culture.] S., 9:30-11:30. Omitted in 1919-20. Mr. Poll.

115. Phonetics and Linguistics.—A general introductory course intended for students of all the language departments. W., 4:00-6:00. Mr. Lotspeich.

[138. Modern German Literature (advanced course).] M., 7:30-9:30. Omitted in 1919-20. Mr. Poll.

Primarily for Graduates

112. Interpretation of Both Parts of Faust and Study of the Legend.—Collateral reading and written reports. Tu., 4:00-6:00. Mr. Poll. Prerequisite: Course 105.

[111b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] *Second semester,* Tu., 4:00-6:00. Prerequisite: Course 105. Mr. Poll. Omitted in 1919-20.

107. Middle High German.—Th., 4:00-6:00. Mr. Poll.

[108a. Old High German.] Special attention to the development into modern German. *First semester,* M. or F., 4:00-6:00. Mr. Lotspeich. Omitted in 1919-20.

113a. Gothic and Germanic Philology.—*First semester,* M., 4:00-6:00. Mr. Lotspeich.

[126. Old Norse.] M. or F., 4:00-6:00. Mr. Lotspeich. Omitted in 1919-20.

[109b. German Seminary.] Willem's *Van den vos Reinaerde. Second semester,* Tu., 4:00-6:00. Mr. Poll. Omitted in 1919-20.

GREEK

For Graduates and Undergraduates

Additional reading will be required of graduate students taking work in courses open to undergraduates.

104. Advanced Reading.—Three hours, to be arranged. Mr. Battle.

For Graduates Only

122. New Testament Syntax.—M., 1:00-3:30. Mr. Battle.

123. Conference Course.—Tu., Th., 11:30-12:30. Mr. Battle.

HISTORY

For Graduates and Undergraduates

Graduate students enrolled in mixed courses are expected to do extra work in order to receive full credit for the course.

125. European History Since 1814.—Tu., Th., 10:30-11:30. Mr. Whitcomb.

[159. England Since 1815.] Tu., Th., 11:30-12:30. Mr. McGrane. Omitted in 1919-20.

160. English Foreign Policy.—Tu., Th., 1:00-2:00. Mr. McGrane.

117. Recent American History.—M., W., F., 8:30-9:30. Mr. Cox.

120. Spain and Spanish America.—M., W., F., 9:30-10:30. Mr. Cox.

[116. American Diplomacy.] This course may be counted in part towards a major in political science, as well as in history. M., W., F., 8:30-9:30. Mr. Cox.

Omitted in 1919-20.

Primarily for Graduates

139. Seminary in American History.—Tu., 4:00-6:00. Mr. Cox.

Note.—Certain courses in Lane Seminary and in the Hebrew Union College are accepted for credit towards a Master's degree. For further information consult the head of the Department of History.

LATIN

For Graduates and Undergraduates

104. Selections from Cicero's *De Oratore* and *Brutus*.—Additional work must be taken by those who desire graduate credit; in no case may such credits be counted towards the Doctor's degree. Three hours, to be arranged. Mr. Burnam.

For Graduates Only

(Hours in all cases to be arranged)

107. Proseminar.—Lectures on rhetoric; libraries; books and their materials in ancient times; hermeneutics and criticism; history of scholarship. One hour. Mr. Burnam.

109. Latin and Romance Palaeography.—Requires the ability to read French and German. Three hours. Mr. Burnam.

Prerequisite: Four years of undergraduate Latin.

[110. Latin Seminary.]
Omitted in 1919-20.

[112. Graduate Study.]
Omitted in 1919-20.

Attention is called to German 115, General Course in Phonetics and Linguistics.

*SANSKRIT

[130. An elementary course in Sanskrit for graduates and undergraduates.] Three hours, to be arranged. Mr. Burnam.
Omitted in 1919-20.

132. A supplementary course for those who have had Course 130. Graduates only. Three hours, to be arranged. Mr. Burnam.
Prerequisite: Course 130 or its equivalent.

MATHEMATICS

For Graduates and Undergraduates

108a. Advanced Integral Calculus.—M., W., F., 9:30-10:30. Additional examples required of graduate students. Mr. Hancock.

109b. Differential Equations.—M., W., F., 9:30-10:30. Mr. Hancock.

[115. Theory of Equations, Including Determinants.] M., W., F., 9:30-10:30. Mr. Hancock.
Omitted in 1919-20.

Primarily for Graduates

131. Theory of Numbers, Part II.—Algebraic numbers.—Dedekind's Theory.—Tu., Th., 4:00-6:00. Mr. Hancock.

128. Theory of Functions of a Complex Variable.—M., W., 4:00-5:00. Mr. Moore.

126. History and Teaching of Mathematics.—W., 4:00-5:00; F., 4:00-6:00. Mr. Slocum.

140. Seminary.—Credit according to number of hours elected. Hours by special agreement. Mr. Slocum.

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*Admission to courses in Sanskrit is by permission only.

MATHEMATICS (APPLIED)

Primarily for Graduates

126. History and Teaching of Mathematics.—Three hours' credit. Open to teachers in the public schools. Mr. Slocum.

111a. Fourier's Series and Spherical Harmonics.—*First semester,* Tu., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

110b. Theory of Errors and Method of Least Squares.—*Second semester,* M., 4:00-6:00; W., 11:30-12:30. Mr. Slocum.

116a. Theoretical Mechanics (advanced course).—*First semester,* Tu., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

116b. The Mathematical Theory of Elasticity.—*Second semester,* Tu., 4:00-5:00; Th., 4:00-6:00. Mr. Slocum.

140. Seminary.—Research in some special topic of applied mathematics or mechanics. Credit according to number of hours elected. Hours by special arrangement. Mr. Slocum.

MECHANICAL ENGINEERING

M. E. 132. Advanced Experimental Engineering.

PATHOLOGY

108. Research.—Open to any qualified person after consultation with the head of the department. Dr. Woolley.

PHILOSOPHY

For Graduates

While these courses include the undergraduate courses coming at the same hours, they are more intensive than the latter and involve in part another subject-matter.

102a. Logic.—M., W., F., 11:30-12:30. Mr. Tawney.

102b. Theory of Scientific Method.—M., W., F., 11:30-12:30. Mr. Tawney.

[103a. History of Philosophy from the Italian Renaissance to the Time of Kant.] M., W., F., 8:30-9:30. Mr. Tawney.
Omitted in 1919-20.

[103b. History of Modern Philosophy from the Time of Kant.] M., W., F., 8:30-9:30. Mr. Tawney.
Omitted in 1919-20.

104a. History of Philosophy to the Beginning of the Christian Era.—M., W., F., 8:30-9:30. Mr. Hartman.

104b. History of the Philosophy of the Middle Ages.—M., W., F., 8:30-9:30. Mr. Hartman.

105a. Ethics.—
Sec. I: M., W., F., 10:30-11:30. Mr. Tawney.
Sec. II: M., W., F., 1:00- 2:00. Mr. Hartman.

105b. Ethical Interpretations.—
Sec. I: M., W., F., 10:30-11:30. Mr. Tawney.
Sec. II: M., W., F., 1:00- 2:00. Mr. Hartman.

122. Ethics.—M., 7:30-9:30. Mr. Tawney.

108a. Aesthetics, the Theory of Art and the Beautiful.—Tu., Th., 1:00-2:00. Mr. Hartman.

108b. Aesthetics, the Theory of Art and the Beautiful.—Tu., Th., 1:00-2:00. Mr. Hartman.

126. Ancient and Medieval Philosophy.—Th., 5:00-7:00. Mr. Hartman.

120. British Empiricism.—Th., 8:30-10:30. Mr. Hartman.

112. Philosophical Method.—Tu., 8:30-10:30. Mr. Tawney.

133. Courses in Jewish philosophy given in the Hebrew Union College by Dr. Neumark and Dr. Kohler.

PHYSICS

For Graduates and Undergraduates

[132a. Philosophy of Science.] Tu., Th., 11:30-12:30. Mr. More.
Omitted in 1919-20.

132b. Philosophy of Science.—Tu., Th., 11:30-12:30. Mr. More.

[103a. Theoretical Mechanics.] Tu., Th., S., 11:30-12:30. Mr. Gowdy.
Omitted in 1919-20.

[118b. Theory of Electricity and Magnetism.] Tu., Th., S., 10:30-11:30. Mr. Gowdy.
Omitted in 1919-20.

119a. Theory of Heat.—Tu., Th., S., 11:30-12:30. Mr. More.

115b. Theory of Light.—Tu., Th., S., 10:30-11:30. Mr. More.

NOTE.—The above courses may be counted towards fulfilling the requirements of a minor in physics. The courses listed below may be counted for either a major or a minor in physics.

108. Advanced Experimental Physics.—Credit according to number of hours elected. Mr. Allen, Mr. More.

110. Seminary.—W., 4:00-6:00. Mr. More.

133a. Discharge of Electricity through Gases.—Twice weekly, hours to be arranged. Mr. Allen.

133b. Discharge of Electricity through Gases.—Twice weekly, hours to be arranged. Mr. Allen.

FOR GRADUATES ONLY

107. Lectures on Theoretical Physics.—Twice weekly. Mr. More.

125a. Theoretical Mechanics.—See under Mathematics 116a. Mr. Slocum.

109. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the mechanician. Daily. Mr. More, Mr. Allen.

PHYSIOLOGY

(THE JOSEPH EICHBERG PROFESSORSHIP)

107. Research.—Open to any qualified person after consultation with the head of the department. Dr. Fischer.

POLITICAL AND SOCIAL SCIENCE

POLITICAL SCIENCE

FOR GRADUATES AND UNDERGRADUATES

In courses open to both graduates and undergraduates, graduate students are expected to do a greater amount of reading than undergraduates, and such additional work as the instructor prescribes. The courses are open only to graduate students whose major subject is in some other department.

111b. Municipal Administration.—M., W., F., 8:30-9:30. Mr. Lowrie.

110. Problems in National Administration.—*Second semester,* Tu., Th., 9:30-10:30. Mr. Gardner.

117. Constitutional Law.—*First semester,* M., W., F., 9:30-10:30. Mr. Gardner.

109. European Governments.—*Second semester,* M., W., F., 9:30-10:30. Mr. Gardner.

102. International Law.—M., W., 11:30-12:30. Mr. Lowrie.

112. World Politics.—F., 11:30-12:30. Mr. Lowrie.
Should be elected with Course 102.

103. Development of Political Thought.—*First semester,* Tu., Th., 1:00-2:00. Mr. Gardner.

113. Readings in Political Thought.—Hours to be arranged. Two credits. Mr. Gardner.
Prerequisite: Course 103.

125. Seminar.—M., 4:00-6:00. Mr. Lowrie.

Courses Regularly Given, but Omitted during 1919-20

104. Political Parties. Mr. Gardner.

106. Finance and Taxation. Mr. Lowrie.

SOCIAL SCIENCE

(Field work is required in all advanced courses)

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students are expected to do a greater amount of reading than undergraduates, and such additional work as the instructor prescribes. The courses are open only to graduate students whose major subject is in another department.

121. Social Construction.—*Second semester,* M., W., F., 9:30-10:30. Mr. Thrasher.

118. Social Pathology.—*First semester,* M., W. F., 10:30-11:30. Mr. Thrasher.

120. Social Treatment of Crime.—*Second semester,* M., W., F., 10:30-11:30. Mr. Thrasher.

124a. Immigration.—*First semester,* Tu., Th., 9:30-10:30. Mr. Thrasher.

124b. Americanization of Aliens.—*Second semester,* Tu., Th., 9:30-10:30. Mr. Thrasher.

140. Modern Charities.—*First semester,* Tu., Th., 10:30-11:30. Mr. Thrasher.

141. Principles and Methods of Social Work.—*Second semester,* Tu., Th., 10:30-11:30. Mr. Thrasher.

142. Sex and Society.—*First semester,* Tu., Th., 11:30-12:30. Mr. Thrasher.

143. Social Aspects of Religion.—*Second semester,* Tu., Th., 11:30-12:30. Mr. Thrasher.

127. Field Studies.—Opportunity is given for research in applied sociology. For advanced students. Credit according to number of hours elected. Mr. Thrasher.

PSYCHOLOGY

For Graduates and Undergraduates

A theme and additional reading are required of all graduate students who enter courses open to undergraduates.

102a. Experimental Psychology.—M., W., F., 2:00-5:00. Mr. Diserens.

102b. Experimental Psychology.—M., W., F., 2:00-5:00. Mr. Diserens.

109. Mental and Physical Tests.—Laboratory methods. Two credits per semester. Tu., 3:00-5:00. Mr. Breese, Mr. Diserens.

120a. Psychology of Primitive Peoples.—S., 9:30-11:30. Mr. Talbert.

120b. Psychology of Primitive Peoples.—S., 9:30-11:30. Mr. Talbert.

Primarily for Graduates

103. Research.—Hours to be arranged. Mr. Breese.

104. Seminar.—A critical study of the most important problems in psychology. Th., 3:00-5:00. Mr. Breese.

ROMANCE LANGUAGES

FRENCH

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

104. French Drama in the Seventeenth Century.—Tu., Th., 9:30-10:30. Mr. Ogden.

105. French Drama in the Nineteenth Century.—W., F., 1:00-2:00. Mr. Passarelli.

112. Old French.—Lectures and readings. Tu., 4:00-6:00. Mr. Hubert.

124. Nineteenth Century Poets.—Tu., 4:00-6:00. Mr. Ogden.

126. Development of the French Drama.—Tu., Th., 9:30-10:30. Mr. Ogden.

115. French Conversation.—M., W., F., 11:30-12:30. Mr. Passarelli.

For Graduates Only

117. Old Provençal.—Hours to be arranged. Mr. Ogden.

SPANISH

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

108. Cervantes (Don Quixote) and Calderón.—Th., 4:00-6:00. Mr. Bassett.

[122. Spanish Literature in the Sixteenth and Seventeenth Centuries.] Th., 4:00-6:00. Mr. Bassett.

Omitted in 1919-20.

ITALIAN

For Graduates and Undergraduates

In the following course additional reading is required of graduate students.

116. Italian Literature in the Nineteenth Century.—M., 3:00-5:00. Mr. Passarelli.

ZOOLOGY

To pursue advanced courses in zoology, the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in zoology, students must have completed Courses 1, 2, 5, 17b, 18b, 19b, 13a, 14a, 20b, or their equivalents. (See Announcement of the College of Liberal Arts.)

Courses under the heading "For Undergraduates and Graduates" may be counted as graduate subjects with full credit towards the degree of Master of Arts by students who have elected majors in other departments. The requirements for a higher degree, when zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 13, 14).

For Graduates and Undergraduates

110a. Microscopical Technique.—Tu., Th., 1:30-4:30. Mr. Wieman.

110b. Cytology.—Tu., Th., 1:30-4:30. Mr. Wieman.

129. Advanced Zoology.—Hours to be arranged. Two or three credits. Mr. Wieman, Mr. Day.

Primarily for Graduates

131. Research.—Hours to be arranged. Mr. Wieman.

132. Seminary.—Reading and discussion of papers in zoological journals. One credit. Tu., 4:30. Mr. Wieman.

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UNIVERSITY OF CINCINNATI RECORD

SERIES I, VOL. XVI APRIL, 1920 No. 2, PART 3

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1920-1921

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

ISSUED QUARTERLY: JANUARY, APRIL, JULY, OCTOBER

ENTERED AS SECOND-CLASS MATTER MAY 19, 1913, AT THE POST OFFICE AT CINCINNATI, OHIO, UNDER THE ACT OF AUGUST 24, 1912

DEPARTMENTS OF THE UNIVERSITY

GRADUATE SCHOOL

McMICKEN COLLEGE OF LIBERAL ARTS

COLLEGE FOR TEACHERS

COLLEGE OF ENGINEERING AND COMMERCE

COLLEGE OF MEDICINE
School of Nursing and Health

COLLEGE OF LAW (Cincinnati Law School)

For Announcement of the Graduate School, address:

The Director of Admissions
University of Cincinnati
Cincinnati, Ohio

UNIVERSITY OF CINCINNATI RECORD

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1920-1921

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

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CALENDAR

1920

Sept. 27-Oct. 2	Registration days for the Graduate School
Nov. 25-27, Inc.	Thanksgiving recess

CHRISTMAS RECESS

Monday, December 20—Saturday, January 1, Inclusive

1921

Jan. 3, Monday	Classes resumed
Jan. 31-Feb. 10	First semester examinations
Feb. 12, Saturday	No classes
Feb. 14-16	Registration days for the second semester of the Graduate School
Feb. 22, Tuesday	Washington's Birthday: a holiday
Mar. 24-26, Inc.	Easter recess
May 6, Friday	Oratorical contest for Jones Prizes
May 30, Monday	Memorial Day: a holiday
June 17, Friday	Second semester ends
June 18, Saturday	University Commencement Day

BOARD OF DIRECTORS

Appointed by the Mayor of Cincinnati

Arthur R. Morgan	January,	1921
Alfred Mack	"	1922
Erwin O. Straehley, M.D.	"	1923
Sanford Brown	"	1924
David I. Wolfstein, M.D.	"	1925
Otto J. Renner	"	1926
Rufus B. Smith	"	1927
Robert W. Hilton	"	1928
Emil Pollak	"	1929

OFFICERS

For the Fiscal Year 1920

Rufus B. Smith	Chairman
Daniel Laurence	Clerk
Christie Wilke	Assistant Clerk

COMMITTEES

Committee on Finance: Messrs. Renner, Pollak, Morgan

Committee on Real Estate: Messrs. Brown, Morgan, Mack

Committee on University Buildings and Grounds: Messrs. Pollak, Brown, Mack

Committee on Academic Affairs and Observatory: Messrs. Straehley, Hilton, Wolfstein

Committee on Law and College of Law: Messrs. Mack, Renner, Smith

Committee on College of Medicine: Messrs. Wolfstein, Straehley, Smith

Committee on College of Engineering and Commerce: Messrs. Hilton, Morgan, Renner

ADMINISTRATIVE OFFICERS

CHARLES WILLIAM DABNEY, PH.D., LL.D. . . . . President of the University
Office, 10 McMicken Hall

LOUIS TRENCHARD MORE, PH.D. . . . . Dean of the Graduate School
Office, 20 Cunningham Hall

ERNEST LYNN TALBERT, PH.D. . . . . Director of Admissions and Supervisor of the Evening Academic Courses
Office, 2 McMicken Hall

WHITELAW REID MORRISON, A.M., M.D. . . . . Director of the Gymnasium
Office, Gymnasium Building

DANIEL LAURENCE, B.S. . . . . Secretary of the University
Office, 4 McMicken Hall

CHARLES ALBERT READ, A.B. . . . . Librarian of the University Library
Office, Van Wormer Library Building

LELIA GARVIN HARTMAN, B.L. . . . . Registrar
Office, 7 McMicken Hall

FACULTY AND INSTRUCTORS

CHARLES WILLIAM DABNEY, PH.D., LL.D. . . . . President of the University
JERMAIN GILDERSLEEVE PORTER, PH.D. . . . . Director of the Observatory and Professor of Astronomy
FREDERICK CHARLES HICKS, PH.D. . . . . Sinton Professor of Economics and Commerce
HARRIS HANCOCK, PH.D., SC.D. . . . . Professor of Mathematics
JOHN MILLER BURNAM, PH.D. . . . . Professor of Latin
MAX POLL, PH.D. . . . . Professor of the Germanic Languages
MERRICK WHITCOMB, PH.D. . . . . Professor of History
LOUIS TRENCHARD MORE, PH.D. . . . . Professor of Physics and Dean of the Graduate School
HERMAN SCHNEIDER, SC.D. . . . . Thoms Professor of Civil Engineering
BURTIS BURR BREESE, PH.D. . . . . Professor of Psychology
WILLIAM PAXTON BURRIS, A.M., L.H.D. . . . . Professor of Education
STEPHEN ELMER SLOCUM, B.E., PH.D. . . Professor of Applied Mathematics
NEVIN M. FENNEMAN, PH.D. . . . . Professor of Geology and Geography
GUY ALLAN TAWNEY, PH.D. . . . . Professor of Philosophy
FRANK WADLEIGH CHANDLER, PH.D. . . . . Professor of English and Ropes Professor of Comparative Literature
PHILLIP OGDEN, PH.D. . . . . Professor of Romance Languages
MARTIN H. FISCHER, M.D. . . . . Joseph Eichberg Professor of Physiology
HENRY MCELDERRY KNOWER, PH.D. . . . . Francis Brunning Professor of Anatomy
ALEXANDER MASSEY WILSON, M.E. . . . . Professor of Electrical Engineering
HARRIS MILLER BENEDICT, PH.D. . . . . Professor of Botany
SELDEN GALE LOWRIE, PH.D. . . . . Professor of Political Science
WILLIAM BUCHANAN WHERRY, A.B., M.D. . . . . Professor of Bacteriology and Hygiene
ROGER S. MORRIS, A.B., M.D. . . . . Frederick Forchheimer Professor of Medicine
WILLIAM JAMES BATTLE, PH.D. . . . . Professor of Greek
ALFRED LAWRENCE HALL-QUEST, A.M. . . . . Professor of Education
ROBERT C. PUGH, LL.B. . . . . G.H. Wald Professor of Law of Contracts
GUSTAVE MAURICE BRAUNE, C.E. . . . . Professor of Civil Engineering
HARRY SHIPLEY FRY, PH.D. . . . . Professor of Chemistry and Director of the Chemical Laboratory
HARRY LEWIS WIEMAN, PH.D. . . . . Professor of Zoology
EDWARD F. MALONE, A.B., M.D. . . . . Professor of Histology
ALEXANDER LEWIS JENKINS, M.E. . . . . Professor of Mechanical Engineering
ALBERT PRESCOTT MATHEWS, PH.D. . . . . Professor of Bio-Chemistry
DENNIS E. JACKSON, PH.D., M.D. . . . . Professor of Pharmacology, Materia Medica, and Therapeutics

Orland R. Sweeney, ph.d. . . . . Professor of Chemical Engineering
Samuel James McIntosh Allen, ph.d. . . Professor of Experimental Physics
Claude M. Lotspeich, ph.d. . . Professor of Comparative Philology, Department of German
Frank K. Sechrist, ph.d. . . . . Professor of Education
Earl C. Arnold, a.b., ll.b. . . . . Professor of Law
Charles E. Weber, ll.b. . . . . Professor of Law
Carl C. Wheaton, ll.b. . . . . Professor of Law
Elmer Cummings Griffith, ph.d. . . . . Acting Professor of History
Clyde William Park, a.m. . . . . Professor of English, College of Engineering and Commerce
Robert Clyde Gowdy, ph.d. . . . . Professor of Physics
Henry Max Goettsch, ph.d. . . . . Associate Professor of Industrial Chemistry
Charles Napoleon Moore, ph.d. . . . . Associate Professor of Mathematics
Clarence D. Stevens, a.m. . . . . Associate Professor of English
Henry G. Hartman, ph.d. . . . . Associate Professor of Philosophy
Clarence Oran Gardner, ph.d. . . Associate Professor of Political Science
Earl Frederick Farnau, ph.d. . . Associate Professor of Organic Chemistry
Ralph Edward Oesper, ph.d., Associate Professor of Analytical Chemistry
Shiro Tashiro, ph.d. . . . . Associate Professor of Bio-Chemistry
Clarence James Foreman, ph.d. . . . . Associate Professor of Economics
Bertha K. Young, a.m. . . . . Assistant Professor of English
Orville Turner Wilson, ph.d. . . . . Assistant Professor of Botany
Henry Robinson Shipherd, ph.d. . . . . Assistant Professor of English
Walter H. Bucher, ph.d. . . . . Assistant Professor of Geology
Otto Charles von Schlichten, a.b. . . . . Assistant Professor of Geology
Ernest Lynn Talbert, ph.d. . . . . Assistant Professor of Psychology
Hubertis Maurice Cummings, ph.d. . . . . Assistant Professor of English
Reginald Charles McGrane, ph.d. . . . . Assistant Professor of History
Edward C. Day, ph.d. . . . . Assistant Professor of Zoology
Stephen J. Felton, met.e. . . . . Assistant Professor of Metallurgy
Merton Jerome Hubert, a.m. . . Assistant Professor of Romance Languages
William A. Crowley, ph.d. . . . . Assistant Professor of Philosophy
Irving H. Brown, a.m. . . . . Assistant Professor of Romance Languages
John C. Donaldson, ph.b., m.d. . . . . Assistant Professor of Anatomy
Selby Frame Vance, a.m., d.d., ll.d. . . Lecturer on Biblical Literature
E. Lucy Braun, ph.d. . . . . Instructor in Botany
Louis A. Passarelli, a.m. . . . . Instructor in Romance Languages
Floyd Eldon Beghtel, a.m. . . . . Instructor in Botany
Clarence A. Mills, a.b. . . . . Instructor in Bio-Chemistry
Walter C. Phillips, ph.d. . . . . Instructor in English
Raymond Chambers, a.m. . . . . Instructor in History
George E. Davis, a.m. . . . . Instructor in Mathematics
Ethel Goldsmith, a.b. . . . . Assistant in Psychology

ADMISSION

Admission to the Graduate School is granted to holders of a Bachelor's degree conferred by the University of Cincinnati, and to those who present documentary evidence of having received such a degree from other institutions whose requirements are substantially equivalent. Admission to the Graduate School does not, however, signify candidacy for an advanced degree.

Properly qualified students, when duly registered, may, with the approval of the heads of the departments concerned, be admitted as auditors to courses of study. No work taken by auditors may under any circumstances be counted towards a degree.

FEES AND EXPENSES

All tuition and fees required from students must be paid in advance and as a condition of registration. Registration shall not be considered as completed until all such payments have been made, and a "late registration fee" shall be added to fees not paid on the days set apart for registration. If fees are not paid promptly, the deans are authorized to exclude students from attendance upon their classes.

Fees are subject to change as conditions necessitate; such changes take effect at once and apply to students already enrolled, unless otherwise specified.

Tuition and fees are not returnable except when withdrawal from the University is caused by sickness or causes entirely beyond the control of the student. Students withdrawing under discipline forfeit all rights to a return of any portion of their fees.

The full amount of tuition and fees shall be returned to students who fail of admission to the University after same have been paid. In other cases refunders, when allowed, shall be in the following proportions:

During 1st and 2d weeks	80%
During 3d and 4th weeks	60%
During 5th and 6th weeks	40%
During 7th and 8th weeks	20%

After the eighth week no refunder shall be allowed, but a credit memorandum may be issued for the total amount of the tuition or fees.

When the right of a student to register as a citizen of Cincinnati is in doubt, he must raise the question at once with the Registrar, and obtain the blank provided for the purpose. He shall then present his case in

writing to the proper authorities, who will pass upon the matter. No person can gain residence in Cincinnati by enrolling as a student in the University.

If a student misrepresents himself as a citizen of Cincinnati at the time of registration, he shall be assessed the sum of $10 in addition to the tuition for that semester.

TUITION FEES

Tuition in the Graduate School is free to residents; non-residents are charged at the rate of $5 per credit hour per semester.

EVENING ACADEMIC COURSES

Tuition in the Evening Academic Courses is free (a) to all citizens of Cincinnati; (b) to all teachers* who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of $5 per course per annum. Non-residents, other than teachers, are charged tuition at the rate of $5 per credit hour per semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees are charged for courses in the laboratory sciences.

EXTENSION COURSES

A fee of $5 is charged for admission to *each* winter Extension Course; $7.50 for *each* summer Extension Course.

COURSES FOR TEACHERS*

Teachers enrolled in the Graduate School pay the regular library fee of $5 per annum. Tuition is free (a) to all teachers in the public schools who are citizens of the city; (b) to all teachers who, although non-residents, are engaged in teaching in the public schools of the city. All other non-resident teachers are charged tuition at the rate of $5 per course per annum, payable in advance.

*Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

COMBINATION COURSES

Regular students enrolled in the Graduate School may elect in the College of Medicine courses for which they receive credit in their own college, without the payment of additional tuition to the College of Medicine. They must, however, pay the usual laboratory fees.

Special students who are taking courses in any college for professional purposes must pay the usual rate of tuition charged by the college in which credit is received.

LABORATORY FEES

All laboratory fees are payable strictly *in advance.*

A student will not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Botany, $10 per semester; Home and School Gardening, $2.50 for the course.

Chemistry, $15 per semester; $15 per summer term. ($10 per summer term for pre-medics.)

Geology, $5 per semester; $2.50 per semester for a course having but one laboratory period a week.

Metallurgy, $7.50 per semester; $7.50 per summer term. (Not required of students taking chemistry.)

Physics, $10 per semester; $5 per semester for a course having but one laboratory period a week.

Psychology, $5 per semester.

Zoology, $10 per semester for each course.

Graduate students taking laboratory courses in the College of Medicine must pay for each course $15 per semester; breakage deposit $10. (This includes surgical anatomy, bacteriology, bio-chemistry, histology, pathology, pharmacology, physiology.)

GRADUATION FEES

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of $10 is charged a candidate for the degree of Master of Arts, and a fee of $20 is charged for the degree of Doctor of Philosophy.

MISCELLANEOUS FEES

GYMNASIUM

A gymnasium fee of $5 per annum ($2.50 per semester) is charged all students in the Graduate School who elect twelve hours of work a week.

The same fee is charged all other students who desire to avail themselves of the privileges of the gymnasium and the swimming pool.

CONTINGENT

A contingent fee of $10 per annum ($5 per semester) is charged all non-resident students in the Graduate School taking twelve hours of work a week; a contingent fee of $5 per annum ($2.50 per semester) is charged all non-resident students taking more than six hours, but less than twelve.

LIBRARY

All students in the Graduate School must pay a library fee of $5 per annum at the opening of the session.

STUDENT ACTIVITY FEE

All regular day students in all the colleges of the University must pay a student activity fee of $5 per annum.

LATE REGISTRATION

Students who apply for registration or submit schedules of study on days other than those designated are required to pay a fee of $1.

BREAKAGE DEPOSITS

An initial breakage deposit of $10 is required of every student who registers for a laboratory course in chemistry, and a $5 breakage deposit is required for each additional semester or summer term of laboratory work in the same school year. If, however, a student surrenders his laboratory outfit at the end of any semester or term, an initial breakage deposit of $10 will be required when the student again registers for a laboratory course in chemistry.

Five dollars of this initial breakage deposit must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining $5 a coupon-ticket will be issued to the

student, with which supplies and apparatus may be obtained at the chemistry storeroom. Should this coupon-ticket become exhausted, the student must purchase a new ticket ($5) before further supplies will be issued to him at the storeroom.

A breakage deposit of $5 is required of every student who registers for a metallurgy laboratory course. This deposit is not required of students who have paid the regular $10 breakage deposit for chemistry.

FELLOWSHIPS, SCHOLARSHIPS AND PRIZES

The D. A. R. Fellowship in American History was established in 1900 by the Daughters of the American Revolution. It yields an income of $100 per annum.

The Hanna Fellowship in Physics was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is $500 a year.

The Ten Baldwin Fellowships, each amounting to $500 in addition to free tuition, have been provided by the Francis Howard Baldwin bequest. For further information apply to the Dean of the Graduate School.

The Du Pont Scholarship, of $350, has been offered for the session 1920-1921 by the E. I. Du Pont de Nemours Company. The recipient shall do graduate work in chemistry or chemical engineering.

The Alliance Française Scholarship, of $300, was established in 1904 by the Alliance Française of the city of Cincinnati. It is awarded to the student in the Department of Romance Languages showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

The Armstrong-Hunter Memorial Fund, valued at $1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund has been used to found a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

Rhodes Scholarships.—Men who have completed their Sophomore year at the University of Cincinnati are eligible to compete for the Cecil Rhodes Scholarships, tenable for three years at Oxford University, England, with a stipend of $1,500 each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curriculum activities. Further information may be obtained from any member of the Rhodes Scholarship Committee of Selection for Ohio: Chairman, President W. O. Thompson, Ohio State University, Columbus,

Ohio; Professor B. E. Schmitt, Western Reserve University, Cleveland, Ohio; Cary R. Alburn, Esq., Attorney, Garfield Bank Building, Cleveland, Ohio; Secretary, Professor Leigh Alexander, Oberlin College, Oberlin, Ohio.

In addition to the above, the University offers ten scholarships in several departments which exempt their holders from the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

For the fellowships, scholarships, and prizes of the various colleges, consult their several Announcements.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

Completion of the requirements for the Master's degree requires at least one full year's residence in the Graduate School. Acceptance in candidacy for the degree of Master of Arts shall be determined by the Advisory Committee not later than the beginning of the last semester of work. When a student's college training has been defective, or when he is registered in a professional school, engaged in teaching, or otherwise occupied so that he cannot devote his entire time to his work, the Advisory Committee shall determine how much, if at all, the one-year period should be increased.

A student desiring to become a candidate for this degree shall designate, at the time of his admission to the Graduate School, the subjects and courses which he elects to study, and shall at the same time obtain approval of his election from his Adviser (the head of the department in which he elects his major work). The student must then satisfy the Dean of the Graduate School that the courses he has elected have been approved by the heads of the departments concerned.

The courses offered for the degree of Master of Arts shall represent not less than twenty-four credit hours of graduate instruction, of which at least twelve shall be in the major subject. In case the candidate elects a major in the same department in which he has completed a major in fulfillment of the requirements for a Bachelor's degree, he may, under the direction of his Adviser, elect sufficient work in some allied department to complete the twelve credit hours. No credit is given for a course in which the student does not receive a record of "Satisfactory."

Each candidate for the Master's degree must present a thesis on a subject approved by his Adviser. The title of this thesis shall be submitted to the Dean at least six months before the degree is conferred. The thesis must be typewritten on regulation paper and be filed with the

Registrar before the close of the final semester of graduate study, together with a certificate of approval from the student's Adviser. The date for submitting the thesis is determined by the Adviser.

Candidates for the degree of Master of Arts are required to pass an oral examination before a committee of the faculty.

Degrees will not be conferred *in absentia*, except by special permission from the President.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

For the Doctor's degree three years of graduate study will ordinarily be required. In cases where the student's college training has been defective or he cannot devote his whole time to the work, the period of study will be longer than three years. At least the last year of study must be spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is satisfactory in character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These are known as a major and two minor subjects, not more than two of which shall be selected in one department. The candidate shall satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, constitute an advisory committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree he must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction embodied in a major and two minor subjects, thirty units of which must be given to the major subject, and must have passed such written examination on his major and minor subjects as the Advisory Committee may indicate. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment. No credit is given for a course in which the student does not receive a record of "Satisfactory."

The candidate is furthermore required to present, in such form as the Advisory Committee may determine, a thesis which gives evidence of high

attainment and power of independent research, and he must pass satisfactorily an oral examination before the faculty.

All theses offered for the Doctor's degree must be filed with the Registrar not later than six weeks before the close of the final semester of graduate study. Moreover, each student upon whom the degree of Doctor of Philosophy is conferred, is required to deposit in the University library one hundred printed copies of his thesis. If the thesis is published in a journal approved by the candidate's Advisory Committee, ten printed copies may be deposited in the library. The candidate may receive his diploma before the thesis is printed, provided a typewritten copy is deposited with the Librarian and the sum of $50 with the Registrar of the University. This sum will be returned upon the presentation to the library of the required number of printed copies of the thesis.

Degrees will not be conferred *in absentia*, except by special permission from the President.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained by work done in residence at the University of Cincinnati.

INSTRUCTION

The work of each candidate for a degree shall be under the direction of an advisory committee, composed of the Dean and of the heads of the departments in which the work is taken.

The unit of instruction is one period a week for one semester.

Graduate students will receive no credit towards a degree of Master of Arts or Doctor of Philosophy for courses which are not of an advanced character. All courses for which credit is expected must be listed in the catalogue of the Graduate School. Supplementary work must be specified in courses which are intended primarily for advanced undergraduate students; otherwise, but half credit will be allowed.

While the nature of the student's work may vary in the subjects selected, it is understood to require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as *in absentia*. No credit will be given towards a graduate degree for work done prior to the conferring of a Bachelor's degree or its equivalent.

SPECIAL ARRANGEMENTS

With the approval of the Dean of the Graduate School and their Advisers, candidates may submit the following courses taken in the Lane Theological Seminary and in the collegiate department of the Hebrew Union College in partial fulfillment of the requirements for the Master of Arts degree. Not more than twelve units may be so counted.

LANE THEOLOGICAL SEMINARY

3. Old Testament History. Dr. Farr
5. The Psalms.—*First semester.* Dr. Farr
6. The Prophets.—*Second semester.* Dr. Farr
4. Old Testament Thought.—*First semester.* Dr. Farr
13. Messianic Prophecy.—*Second semester.* Dr. Farr

HEBREW UNION COLLEGE

1. Biblical Literature
2. Rabbinical Literature
3. Jewish Philosophical Literature

For detailed description of above courses, see catalogue of the Hebrew Union College.

COURSES OF INSTRUCTION

Courses in the Graduate School extend throughout the year, unless designated by "a" (first semester) or "b" (second semester).

ANATOMY

Facilities are at hand for graduate students electing work in gross human anatomy, histology, neurology, or embryology from a comparative standpoint. Graduate work in these subjects, fulfilling the requirements for the A.M. or PH.D. degrees, will involve more general and philosophical aspects and topics than are expected, at present, from candidates for the M.D. degree. Drs. Knower, Malone, Donaldson

Any of the regular anatomical courses (see Announcement of College of Medicine) are open to undergraduate or graduate students of the University who can show the necessary preliminary preparation and who desire *credits in these subjects towards degrees other than the medical degree.* Applicants should first consult the deans of the faculties supervising their other work. Those interested in research or other special work in anatomy are requested to apply to the Director of the Anatomical Laboratories, Professor Knower.

ASTRONOMY

For Graduates and Undergraduates

An extra amount of computing will be required of graduate students in the following courses:

103. Spherical and Practical Astronomy.—Once a week throughout the year. Mr. Porter

104. Celestial Mechanics.—Once a week throughout the year. Mr. Porter

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BACTERIOLOGY AND HYGIENE

104. Research.—Open to any qualified person after consultation with the head of the department. Credit according to number of hours elected. Dr. Wherry

BIBLICAL LITERATURE

107. First Principles of Biblical Literature.—For graduate credit a thesis on an assigned topic will be required. *First semester.* Tu., Th., 11:30-12:30. Mr. Vance

108. Epic Literature.—For graduate credit a thesis on an assigned topic will be required. *Second semester.* Tu., Th., 11:30-12:30. Mr. Vance

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BIO-CHEMISTRY

Primarily for Graduates

104b. Advanced Bio-Chemistry.—Lecture course. Continuation course for medical and graduate students. *Second semester.* Fifteen hours. One credit hour. Mr. Mathews

105b. Advanced Bio-Chemistry.—Laboratory course. Quantitative methods of bio-chemical analysis of urine, blood, and tissues. Six or 12 hours a week. Two, 3, or 6 credit hours. Mr. Mathews, Mr. Tashiro, Mr. Mills

Prerequisite: Courses 1 and 2 or equivalent

106. Physico-Chemical Methods of Bio-Chemistry.—Conferences and laboratory 6 or 12 hours a week. Three or 6 credit hours. Mr. Tashiro

107. Research. Mr. Mathews, Mr. Tashiro

108. Seminar.—Open to graduate and medical students. Fifteen hours. One credit hour. Department Staff

109. Microchemical Methods.—For studying cell respiration. Three or 6 credit hours. Mr. Tashiro

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BOTANY

To pursue advanced courses in botany the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in botany, students must have completed Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18, or their equivalents. (See Announcement of the College of Liberal Arts.) Courses "For Undergraduates and Graduates" may be counted as graduate subjects towards the degree of Master of Arts by students who have elected majors in other departments. When botany is chosen as a minor for the degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in botany. The requirements for a higher degree, when botany is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 14, 15).

For Graduates and Undergraduates

A thesis is required of all graduates who enroll in courses open to undergraduates.

105. Systematic Botany.—One lecture with one laboratory or field period of work a week on the local plants. Hours to be arranged.
Prerequisite: Courses 1 and 2 — Miss Braun

106a. Plant Pathology.—The causes, symptoms, and prevention of plant diseases. Lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30.
Mr. Wilson

106b. Bacteriology.—Study of the physiology and morphology of bacteria. Lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30.
Mr. Wilson

116a. Plant Histology.—Lec., M., 1:00-2:00; lab., M., W., 1:00-4:00.
Prerequisite: Two years' work in botany — Mr. Beghtel

116b. Plant Cytology.—Lec., M., 1:00-2:00; lab., M., W., 1:00-4:00.
Prerequisite: Course 116a — Mr. Beghtel

117. Special Problems.—One, two, or three credits. Hours to be arranged. Instructor according to problem chosen.
Prerequisite: Three years' work in botany

118. Plant Physiology.—Open to Seniors and graduate students in botany. Two lectures a week. Hours to be arranged.
Mr. Benedict

Primarily for Graduates

120. Current Problems in Botany.—Reviews of recent researches. One or two credit hours. — Mr. Benedict
Prerequisite: Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18

121. Research.—Credit according to number of hours elected.
Mr. Benedict, Mr. Wilson, Miss Braun

CHEMISTRY

SPECIAL REQUIREMENTS FOR HIGHER DEGREES

The Degree of Doctor of Philosophy

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject must offer the following courses or their equivalents (see Announcement of the College of Liberal Arts): 1a, 2a, 3b, 4b, 5a, 6, 7, 8b, 9b, 12a, 13a. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the choice made. Each candidate for an advanced degree in chemistry must take an active part in the chemistry seminar during his graduate residence. The completion of these courses, however, does not satisfy the requirements to be fulfilled by the candidate for a higher degree; he must show a maturity acquired by personal intimacy with the literature and methods of chemistry.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the heads of the departments in which the major work falls. The usual minimum requirements are Courses 1a, 2a, 3b, 4b, 5a, 6, 7. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) are required; if one of the biological sciences has been made the major subject, Courses 8b and 9b are taken.

The Degree of Master of Arts

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

For Graduates and Undergraduates

Graduate students who register for Courses 110a-124b are required to complete additional assignments of a more advanced character than those required of undergraduates.

110a. Advanced Inorganic Chemistry.—Tu., Th., 8:30-9:30. Mr. Fry

111. Inorganic Preparations.—Hours to be arranged. Mr. Fry

112a. Physical Chemistry.—M., W., F., 10:30-11:30. Mr. Farnau

113a. Physical Chemistry, Laboratory.—M., Tu., 1:00-4:00. Mr. Farnau

119a. Intermediate Organic Chemistry.—M., W., F., 9:30-10:30. Mr. Farnau

132b. Electro-Chemistry.—M., W., F., 10:30-11:30. Mr. Farnau

133b. Electro-Chemistry, Laboratory.—Th., F., 1:00-4:00. Mr. Farnau

134a. Colloid Chemistry.—Three lectures a week. Hours to be arranged. Mr. Oesper

128. Ultimate Organic Analysis.—Hours to be arranged. Mr. Oesper

[141a. Phase Rule.] Two exercises a week. Hours to be arranged. Omitted in 1920-21 Mr. Farnau

120b. Advanced Organic Chemistry.—M., W., F., 9:30-10:30. Mr. Farnau

121. Advanced Organic Chemistry, Laboratory.—Credit according to number of hours elected. Mr. Farnau

124b. History of Chemistry.—Three exercises a week. Hours to be arranged. Mr. Fry

Primarily for Graduates

130. Research.—Problems for investigation may be chosen from the following: organic chemistry (130a), inorganic chemistry (130b), physical chemistry (130c), industrial chemistry (130d), or metallurgy (130e).
Mr. Fry, Mr. Sweeney, Mr. Goettsch, Mr. Oesper, Mr. Farnau, Mr. Felton

During the summer of 1920 students engaged in research may enroll in the Graduate School.

140. Seminar.—M., 4:00. Mr. Fry

CIVIL ENGINEERING

C. E. 124. Advanced Research Work

ECONOMICS

(The Sinton Professorship)

For Graduates and Undergraduates

In the following courses additional reading and reports will be required of graduate students.

111. Elements of Economics.—Tu., 3:00-5:00. Mr. Hicks

113. Development of Economic Institutions.—M., 2:00-4:00. Mr. Hicks

114. Economic Policies in Their Relation to Distribution.—Th., 3:00-5:00. Mr. Hicks

115. Transportation.—*First semester*, M., W., F., 10:30-11:30. Mr. Foreman

118. Foreign Trade Policies.—*Second semester*, M., W., F., 10:30-11:30. Mr. Foreman

119. Money and Banking.—*First semester*, M., W., F., 9:30-10:30. Mr. Foreman

120. Monopolies and Trusts.—*Second semester*, M., W., F., 9:30-10:30. Mr. Foreman

117. Socialism.—*First semester*, Tu., Th., 2:00-3:00. Mr. Hicks

116. Labor.—*Second semester*, Tu., Th., 2:00-3:00. Mr. Hicks

131. Statistics.—M., 5:00-7:00. Mr. Foreman

Primarily for Graduates

112. History of Economic Theory.—Twice weekly, hours to be arranged. Mr. Foreman

121. Seminary.—Twice weekly, hours to be arranged. Mr. Hicks

123. Research.—Credit according to number of hours elected. Mr. Hicks, Mr. Foreman

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EDUCATION

Those candidates for graduate degrees who intend to become instructors in education, and those who wish to qualify for supervisory or administrative positions in schools, may elect education as the major subject; other graduate students may elect education as a minor, subject to the approval of the head of the department in which the candidate's major subject is chosen.

Subject to the approval of the instructor in each case, graduate courses in education are open also to teachers who are prepared to pursue such courses in a satisfactory manner, even though such teachers be not candidates for a graduate degree.

A candidate for a graduate degree who elects education as a major subject must have had approved undergraduate courses in education and psychology, and will be required to take Education 101. Beyond these requirements the candidate's elections are subject to the approval of the instructors in education.

101. PHILOSOPHY OF EDUCATION.—The method of philosophy applied in testing theories of education. The implications and applications of significant facts of biology, psychology, sociology, ethics, and logic, are considered in the effort to reach a consistent formulation of the meaning of education. Tu., 4:00-6:00. Mr. Burris

103. SECONDARY EDUCATION.—Function of the high school; programs of study; curriculum making; lesson types; place of high school in American education; the high school teacher; pupil management; educational significance of the various studies. Tu., 4:00-6:00. Mr. Hall-Quest

104. THE PROBLEMS OF ENGLISH IN THE SECONDARY SCHOOL.—A consideration of the principles underlying courses in oral and written composition and literature. S., 8:30-10:30. Mr. Hall-Quest

[105. SEMINAR IN SECONDARY EDUCATION.] W., 4:00-6:00.
Alternates with Courses 109a and b Mr. Hall-Quest
Omitted in 1920-21

[107. ADMINISTRATION OF EDUCATION.] The history and present status of the organization and administration of school systems in the United States. Special attention is given to the progress of reform in school administration during the last quarter century, and to the work of surveys in which methods of scientific measurement have been employed. W., 4:00-6:00. Mr. Burris
Alternates with Course 112
Omitted in 1920-21

109a. THE JUNIOR HIGH SCHOOL MOVEMENT.—A study of the historical development of the junior high school; types of junior high schools; administrative problems; curriculum making; unsolved problems; general meaning. W., 4:00-6:00.
Mr. Hall-Quest

109b. THE PSYCHOLOGY AND SUPERVISION OF STUDY.—A consideration of the psychological principles involved in studying; problems of technic; typical organizations; a review of the results as recorded in comprehensive literature on supervised study. W., 4:00-6:00. Mr. Hall-Quest

110. EXPERIMENTAL EDUCATION.—A course of original investigation in which each student chooses a topic, subject to approval by the instructor, and pursues his problem throughout the year in the related current literature and experimental results published in English and other modern languages. W., 4:00-6:00.
Mr. Sechrist

111. Great Educators.—From time to time this course will be devoted to a critical study of modern educational theories contained in the writings of educators whose influences are felt in current educational opinion and practice. Th., 4:00-6:00. Mr. Burris

1920-21. Froebel and Dewey

1921-22. Locke and Rousseau

1922-23. Herbart and Spencer

112. Measurement of Results in Education.—Intended for those persons who wish to acquaint themselves with modern methods of giving tests and measuring the results of teaching. W., 4:00-6:00. Mr. Burris

Alternates with 107

ENGLISH

COMPARATIVE LITERATURE

(Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates and Upper Classmen

Additional reading and reports are required of graduates taking courses open to undergraduates.

112. Literary Composition.—Tu., Th., 10:30-11:30. Mr. Shipherd
Membership in Course 112 is strictly limited. Those who wish to register should first submit manuscripts to the instructor for approval.

German 115. Phonetics and Linguistics.—Tu., Th., 11:30-12:30. Mr. Lotspeich

107. Old English.—Tu., Th., 8:30-9:30. Mr. Lotspeich

108. The Tragedies of Shakespeare.—W., 4:00-6:00. Mr. Cummings

114. English Drama from Its Origins to 1642.—Tu., Th., 11:30-12:30. Mr. Shipherd

121. English Literature of the Seventeenth Century.—Tu., Th., 9:30-10:30. Mr. Phillips

123. Literary Movement of the Eighteenth Century in England, France, and Germany.—Tu., Th., 2:00-3:00. Mr. Chandler

104. Nineteenth Century Prose.—Tu., Th., 1:00-2:00. Miss Young

152. The Biography.—Tu., 4:00-6:00. Mr. Park

124. Recent European Drama.—Tu., Th., 1:00-2:00. Mr. Chandler

For Graduates Only

120. Studies in the Comic: Seminary.—M., 4:00-6:00. Mr. Chandler

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GEOLOGY AND GEOGRAPHY

For Graduates and Undergraduates

105b. Field Geology and Survey Methods.—Hours and amount of credit to be arranged by agreement with each student. Mr. Bucher

107. Mineralogy.—Lectures and laboratory. Hours to be arranged. Additional determinations required for graduate credit. Th., F., 1:00-4:00. Mr. von Schlichten

108. Introductory Paleontology.—Additional reading required for graduate credit. Hours to be arranged. Mr. Bucher

112. Petrology.—Hours and amount of credit to be arranged. Mr. von Schlichten

113. Special Work in Geology.—Credit according to number of hours elected.

116. Advanced Physiography of the United States.—Additional papers required for graduate credit. Lec., W., 4:00-6:00; S., 10:30-11:30. Mr. Fenneman

119. Historical Geology.—Lec., S., 8:30-10:30; field or lab., 10:30-12:30. Additional reading required for graduate credit. Mr. Bucher

111. Structural Geology.—Tu., 4:00-6:00. Mr. Bucher

122. Appalachian Field Course.—Eight weeks during summer in camp in southwestern Virginia. Eight credits. Mr. von Schlichten

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GERMAN

For Graduates and Undergraduates

Additional reading is required of all graduate students who enter courses open to undergraduates.

105. History of German Literature to the Nineteenth Century. Special study of the classic periods of the twelfth and eighteenth centuries. M., W., F., 10:30-11:30. Mr. Poll

[110. German Composition (advanced course).] S., 9:30-11:30. Mr. Poll
Omitted in 1920-21

[130. Glimpses of German Life and Culture.] S., 9:30-11:30. Mr. Poll
Omitted in 1920-21

137. German Literature of the Eighteenth Century.—M., 7:30-9:30. Mr. Poll

[138. Modern German Literature (advanced course).]—M., 7:30-9:30. Mr. Poll
Omitted in 1920-21

Primarily for Graduates

[112. Interpretation of Both Parts of Faust and Study of the Legend.] Collateral reading and written reports. Tu., 4:00-6:00. Mr. Poll
Prerequisite: Course 105
Omitted in 1920-21

117. German Drama of the Nineteenth and Twentieth Centuries. Tu., 4:00-6:00. Mr. Poll
Prerequisite: Course 105 or 137

[116. German Novel of the Nineteenth and Twentieth Centuries.] Th., 4:00-6:00. Mr. Poll
Prerequisite: Course 105 or 137
Omitted in 1920-21

[111b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] *Second semester*, Tu., 4:00-6:00. Mr. Poll
Prerequisite: Course 105
Omitted in 1920-21

[107. Middle High German.] Th., 4:00-6:00. Mr. Poll
Omitted in 1920-21

108b. Old High German.—Special attention to the development into modern German. *Second semester*, W., 4:00-6:00.
Mr. Lotspeich

113a. Gothic and Germanic Philology.—*First semester*, W., 4:00-6.:00.
Mr. Lotspeich

[126. Old Norse.] M. or F., 4:00-6:00. Mr. Lotspeich
Omitted in 1920-21

109. German Seminary.—Special topics in the drama. Th., 4:00-6:00. Mr. Poll

COMPARATIVE PHILOLOGY

115. Phonetics and Linguistics.—Tu., Th., 11:30-12:30. Open to Seniors and graduates. Mr. Lotspeich

140. Sanskrit (elementary).—Three hours. Mr. Lotspeich

[141. Sanskrit (advanced).] Three hours. Mr. Lotspeich
Omitted in 1920-21

GREEK

For Graduates and Undergraduates

Additional reading will be required of graduate students taking work in courses open to undergraduates.

104. Advanced Reading.—Tu. Th., 1:00-2:00, and one other hour to be arranged. Mr. Battle

For Graduates Only

122. New Testament Syntax.—M., 1:00-3:30. Mr. Battle

123. Conference Course.—Three hours to be arranged. Mr. Battle

Attention is called to Latin 107 (Proseminary for Textual Criticism) and to the courses in Sanskrit and comparative philology offered by Professor Lotspeich.

HISTORY

For Graduates and Undergraduates

Graduate students enrolled in mixed courses are expected to do extra work in order to receive full credit for the course.

125. Europe in the Nineteenth Century.—From the end of the Napoleonic period to the events leading up to the Great War. Tu., Th., 9:30-10:30. Mr. Whitcomb
Recommended for students who have had History 3.

126. Europe and the World War.—Diplomatic struggles leading to a general conflict. The great struggle and subsequent efforts towards reorganization. Tu., Th., 11:30-12:30. Mr. Whitcomb
Open to Seniors and others who have taken History 125 or its equivalent.

[159. England Since 1815.] Tu., Th., 11:30-12:30. Mr. McGrane
Omitted in 1920-21

160. English Foreign Policy.—Tu., Th., 1:00-2:00. Mr. McGrane

117. Recent American History.—M., W., F., 8:30-9:30.
Mr. McGrane

120. Spain and Spanish America.—M., W., F., 10:30-11:30.
Mr. Chambers

[116. American Diplomacy.] This course may be counted in part towards a major in political science, as well as in history. M., W., F., 8:30-9:30.
Omitted in 1920-21

162. History of the West.—Tu., Th., 1:00-2:00. Mr. Chambers

Primarily for Graduates

139. Seminary in American History.—Tu., 4:00-6:00. Mr. McGrane

180. Seminary in Modern European History.—Subject and period to be announced. Two hours. Mr. Whitcomb
For graduate students

Note.—Certain courses in Lane Seminary and in the Hebrew Union College are accepted for credit towards a Master's degree. For further information consult the head of the Department of History.

LATIN

For Graduates and Undergraduates

104. Selections from the Silver Poetry.—Additional work must be taken by those who desire graduate credit; in no case may such credits be counted towards the Doctor's degree. Three hours, to be arranged. Mr. Burnam

*For Graduates Only

(Hours in all cases to be arranged)

107. Proseminar.—Lectures on rhetoric; libraries; books and their materials in ancient times; hermeneutics and criticism; history of scholarship. Three hours. Mr. Burnam

109. Latin and Romance Palaeography.—Requires the ability to read French and German. Three hours. Mr. Burnam
Prerequisite: Four years of undergraduate Latin

*Admission to graduate courses is permissible only after consultation with the instructor.

110. LATIN SEMINARY.—Virgil. Three hours.

111. A COURSE INTRODUCTORY TO THE STUDY OF THE ILLUSTRATED BOOKS OF THE MIDDLE AGES.—One hour. Mr. Burnam

Attention is called to courses in comparative philology, page 28.

MATHEMATICS

FOR GRADUATES AND UNDERGRADUATES

115. THEORY OF EQUATIONS, INCLUDING DETERMINANTS.—M., W., F., 9:30-10:30. Mr. Hancock

[108a. ADVANCED INTEGRAL CALCULUS.] M., W., F., 9:30-10:30. Additional examples required of graduate students. Mr. Hancock
Omitted in 1920-21

[109b. DIFFERENTIAL EQUATIONS.] M., W., F., 9:30-10:30.
Omitted in 1920-21 Mr. Hancock

PRIMARILY FOR GRADUATES

138. THEORY OF NUMBERS, PART IV.—Algebraic numbers. Hilbert's Theory. Tu., Th., 4:00-6:00. Mr. Hancock

129. THEORY OF FUNCTIONS OF A REAL VARIABLE.—M., W., 4:00-5:30. Mr. Moore

126. HISTORY AND TEACHING OF MATHEMATICS.—W., 4:00-5:00; F., 4:00-6:00. Mr. Slocum

140. SEMINARY.—Credit according to number of hours elected. Hours by special agreement. Mr. Slocum

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MATHEMATICS (APPLIED)

PRIMARILY FOR GRADUATES

126. HISTORY AND TEACHING OF MATHEMATICS.—Three hours credit. Open to teachers in the public schools. Mr. Slocum

111a. FOURIER'S SERIES AND SPHERICAL HARMONICS.—*First semester.* Three hours credit. Mr. Slocum

110b. THEORY OF ERRORS AND METHOD OF LEAST SQUARES.—*Second semester.* Three hours credit. Mr. Slocum

116a. THEORETICAL MECHANICS (ADVANCED COURSE).—*First semester.* Three hours credit. Mr. Slocum

116b. THE MATHEMATICAL THEORY OF ELASTICITY.—*Second semester.* Three hours credit. Mr. Slocum

140. SEMINARY.—Research in some special topic of applied mathematics or mechanics. Credit according to number of hours elected. Hours by special arrangement. Mr. Slocum

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MECHANICAL ENGINEERING

M. E. 132. ADVANCED EXPERIMENTAL ENGINEERING

PATHOLOGY

108. RESEARCH.—Open to any qualified person after consultation with the head of the department.

PHILOSOPHY

FOR GRADUATES

While these courses include the undergraduate courses coming at the same hours, they are more intensive than the latter and involve in part another subject-matter.

102a. LOGIC.—Tu., Th., S., 10:30-11:30. Mr. Tawney

102b. THEORY OF SCIENTIFIC METHOD.—Tu., Th., S., 10:30-11:30. Mr. Tawney

103a. HISTORY OF PHILOSOPHY FROM THE ITALIAN RENAISSANCE TO THE TIME OF KANT.—M., W., F., 8:30-9:30. Mr. Tawney

103b. HISTORY OF MODERN PHILOSOPHY FROM THE TIME OF KANT.—M., W., F., 8:30-9:30. Mr. Tawney

[104a. HISTORY OF PHILOSOPHY TO THE BEGINNING OF THE CHRISTIAN ERA.] M., W., F., 8:30-9:30. Mr. Hartman
Omitted in 1920-21

[104b. HISTORY OF THE PHILOSOPHY OF THE MIDDLE AGES.] M., W., F., 8:30-9:30. Mr. Hartman
Omitted in 1920-21

105a. Ethics.—

Sec. I: Tu., Th., S., 10:30-11:30 — Mr. Crowley
Sec. II: M., W., F., 10:30-11:30 — Mr. Tawney
Sec. III: M., W., F., 1:00- 2:00 — Mr. Crowley

105b. Ethical Interpretations.—

Sec. I: Tu., Th., S., 10:30-11:30 — Mr. Crowley
Sec. II: M., W., F., 10:30-11:30 — Mr. Tawney
Sec. III: M., W., F., 1:00- 2:00 — Mr. Crowley

122. Ethics.—M., 7:30-9:30. — Mr. Crowley

108a. Aesthetics.—The theory of art and the beautiful. Tu., Th., 11:30-12:30 — Mr. Hartman

108b. Aesthetics.—The theory of art and the beautiful. Tu., Th., 11:30-12:30. — Mr. Hartman

126. Ancient and Medieval Philosophy.—Th., 5:00-7:00. — Mr. Hartman

127. Recent Tendencies in Philosophy.—W., 9:30-11:30 — Mr. Hartman

123. British Empiricism.—Tu., 4:00-6:00. — Mr. Hartman
Open to Seniors and graduates

113. The Philosophy of Kant.—Tu., 8:30-10:30. — Mr. Tawney

133. Courses in Jewish Philosophy given in the Hebrew Union College by Dr. Neumark and Dr. Kohler.

PHYSICS

For Graduates and Undergraduates

132a. Philosophy of Science.—Tu., Th., 11:30-12:30. — Mr. More

132b. Philosophy of Science.—Tu., Th., 11:30-12:30. — Mr. More

103a. Theoretical Mechanics.—Tu., Th., S., 11:30-12:30. — Mr. More

118b. Theory of Electricity and Magnetism.—Tu., Th., S., 10:30-11:30. — Mr. More

[119a. Theory of Heat.] Tu., Th., S., 11:30-12:30. — Mr. More
Omitted in 1920-21

[115b. Theory of Light.] Tu., Th., S., 10:30-11:30. — Mr. More
Omitted in 1920-21

Note.—The above courses may be counted towards fulfilling the requirements of a minor in physics. The courses listed below may be counted for either a major or a minor in physics.

108. Advanced Experimental Physics.—Credit according to number of hours elected. Mr. Allen, Mr. More

110. Seminary.—W., 4:00-6:00. Mr. More

[133a. Discharge of Electricity through Gases.] Twice weekly, hours to be arranged. Mr. Allen
Omitted in 1920-21

[133b. Discharge of Electricity through Gases.] Twice weekly, hours to be arranged. Mr. Allen
Omitted in 1920-21

For Graduates Only

107. Lectures on Theoretical Physics.—Twice weekly. Mr. More

125a. Theoretical Mechanics.—See under Mathematics 116a. Mr. Slocum

109. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the mechanician. Daily. Mr. More, Mr. Allen

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PHYSIOLOGY

(The Joseph Eichberg Professorship)

107. Research.—Open to any qualified person after consultation with the head of the department. Dr. Fischer

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POLITICAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students are expected to do a greater amount of reading than undergraduates, and such additional work as the instructor prescribes.

111b. Municipal Administration.—*Second semester*, M., W., F., 8:30-9:30. Mr. Lowrie

102. International Law.—*First semester*, M., W., F., 9:30-10:30.
Prerequisite: Junior or Senior standing Mr. Lowrie

109. European Governments.—*Second semester*, M., W., F., 9:30-10:30. Mr. Gardner
Prerequisite: First semester of Course 1

117. Advanced American Government.—A study of the American Constitution as interpreted by the courts. *First semester*, M., W., F., 8:30-9:30. Mr. Gardner
Prerequisite: Course 1

104. The American Party System.—*First semester*, Tu., Th., 9:30-10:30. Mr. Gardner
Prerequisite: Course 1

110. Problems of National Administration.—*Second semester*, Tu., Th., 9:30-10:30. Mr. Gardner
Prerequisite: Course 1

106. Public Finance and Taxation.—M., W., 11:30-12:30.
Prerequisite: Economics 1 Mr. Lowrie

[121. State and Local Administration.] *Second semester*, M., W., F., 11:30-12:30. Mr. Lowrie
Prerequisite: Course 1
Omitted in 1920-21

122. Problems in Municipal Finance.—*Second semester*, Tu., 2:00-4:00. Mr. Lowrie
Prerequisite: Courses 111b, 106

103. Development of Political Thought.—*Second semester*, Tu., Th., 1:00-2:00. Mr. Gardner
Prerequisite: Junior or Senior standing

[113. Reading in Political Thought.] Two credits. Hours to be arranged. Mr. Gardner
Prerequisite: Course 103
Omitted in 1920-21

125. Seminar.—M., 4:00-6:00. To be taken only with the permission of the instructor. Mr. Lowrie

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PSYCHOLOGY

For Graduates and Undergraduates

A theme and additional reading are required of all graduate students who enter courses open to undergraduates.

102a. Experimental Psychology.—M., W., F., 2:00-5:00. Mr. Diserens

102b. Experimental Psychology.—M., W., F., 2:00-5:00. Mr. Diserens

109. Mental and Physical Tests.—Laboratory methods. Two credits a semester. Tu., 3:00-5:00. Mr. Breese, Mr. Diserens

120a. Psychology of Primitive Peoples.—S., 9:30-11:30. Mr. Talbert

120b. Psychology of Primitive Peoples.—S., 9:30-11:30. Mr. Talbert

Primarily for Graduates

103. Research.—Hours to be arranged. Mr. Breese

104. Seminar.—A critical study of the most important problems in psychology. Th., 3:00-5:00. Mr. Breese

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ROMANCE LANGUAGES

FRENCH

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

104. French Drama in the Seventeenth Century.—Tu., Th., 9:30-10:30. Mr. Ogden

105. French Drama in the Nineteenth Century.—W., F., 11:30-12:30. Mr. Kinne

124. Nineteenth Century Poets.—Tu., 4:00-6:00. Mr. Passarelli

125. Development of the French Novel.—Tu., Th., 9:30-10:30. Mr. Ogden

[112. Old French.] Lectures and readings. Tu., 4:00-6:00. Omitted in 1920-21 Mr. Hubert

For Graduates Only

119b. Old Provençal.—Hours to be arranged. Mr. Ogden

SPANISH

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

108. Cervantes (Don Quixote) and Calderon.—Th., 4:00-6:00. Mr. Brown

122. Spanish Literature in the Sixteenth and Seventeenth Centuries.—Tu., 4:00-6:00. Mr. Brown

[126. Old Spanish Readings.] Mr. Brown
Omitted in 1920-21

ITALIAN

For Graduates and Undergraduates

In the following courses additional reading is required of graduate students.

115. Italian Literature in the Nineteenth Century.—M., W., 10:30-11:30. Mr. Passarelli

[117. Italian Prose Composition.] Conversation; commercial prose; composition. M., W., 10:30-11:30. Mr. Passarelli
Alternates with Course 115
Omitted in 1920-21

119. Italian Renaissance.—Dante: *Vita Nuova*; *Divina Commedia*; Petrarch: *Canzoniere*. Two hours weekly.

[121. Italian Chivalric Romance.] Tasso: *Ariosto Boiardo*. Two hours weekly.
Alternates with Course 119
Omitted in 1920-21

SOCIAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students will be required to do a greater amount of reading than undergraduates, and such other additional work as may be prescribed by the instructor.

106. Social Pathology.—M., W., 9:30-10:30. Mr. ———

107. Principles of Social Reconstruction.—Tu., Th., 10:30-11:30. Mr. ———

108. Comparative Social Theories.—M., W., 10:30-11:30. Mr. ———

109. Social Problems.—M., W., 11:30-12:30. Mr. ———

120. Seminar.—M., 1:00-3:00. Mr. ———

ZOOLOGY

To pursue advanced courses in zoology, the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in zoology, students must have completed Courses 1, 2, 5, 17a, 18a, 13a, 14a, 19b, 20b, or their equivalents. (See Announcement of the College of Liberal Arts.) Courses under the heading "For Undergraduates and Graduates" may be counted as graduate subjects with full credit towards the degree of Master of Arts by students who have elected majors in other departments. The requirements for a higher degree, when zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 14, 15).

For Graduates and Undergraduates

110a. Microscopical Technique.—Tu., Th., 1:00-4:00. Mr. Wieman

110b. Cytology.—Tu., Th., 1:00-4:00. Mr. Wieman

129. Advanced Zoology.—Hours to be arranged. Two or three credits. Mr. Wieman, Mr. Day

Primarily for Graduates

131. Research.—Hours to be arranged. Mr. Wieman

132. Seminary.—Reading and discussions of papers in zoological journals. One credit. Tu., 4:00. Mr. Wieman

REGISTRATION OF STUDENTS

1919-1920

Hanna Fellow in Physics

Richards, Harold Frederick (*Physics*) ..... 3205 Harvey Ave.
A. B., University of Cincinnati, 1916; *A. M., Ibid*, 1917

D. A. R. Fellow in American History

Leyland, Herbert T. ..... 2030 Auburn Ave.
LL. B., University of Cincinnati, 1919

Baldwin Fellows

Bell, William H. (*Bacteriology*) ..... 1803 Williams Ave., Norwood, O.
A. B., Indiana State Normal College, 1917; *A. M., University of Indiana*, 1918

Feld, Jacob (*Civil Engineering*) ..... 511 Hickory St., and 582 Herkimer St., Brooklyn, N. Y.
B. S., College of the City of New York, 1918

Heavner, John F. (*Economics*) ..... 304 Randolph Ave., Elkins, W. Va.
A. B., Ohio Wesleyan University, 1919

Hoeck, George W. (*Bio-Chemistry*) ..... 2822 Highland Ave.

*McLaughlin, Anne Susan (Mrs. Roy) (*Education*) ..... 756 Froome Ave.
A. B., University of Cincinnati, 1905; *A. M., Ibid.*, 1906

Soller, Walter (*Mechanical Engineering*) ..... 2415 Talbott Ave.
M. E., University of Cincinnati, 1917

Tyndall, Elsa Mae (*English*) ..... 240 E. University Ave., and Lebanon, Ill.
A. B., Ewing College, 1909

Wuest, Alma M. (*Mathematics*) ..... 158 W. McMillan St.
A. B., University of Cincinnati, 1915

Graduate Fellow in Economics

Martin, George E. (*Economics*) ..... 210 W. McMillan St., and 814 Third St., Marietta, O.
A. B., Marietta College, 1917

Dupont Fellow

Donnelly, Joseph L. (*Chemistry*) ..... 291 Mt. Pleasant Ave., Ft. Thomas, Ky.
A. B., University of Cincinnati, 1917; *A. M., Ibid.*, 1919

University Scholars

Baker, Williametta (*Latin*) ..... 1120 Vine St., Newport, Ky.

Donnelly, Joseph L. (*Chemistry*) [*ELA*] ..... 291 Mt. Pleasant Ave., Ft. Thomas, Ky.
A. B., University of Cincinnati, 1917

Elliott, Adaline H. (*English*) ..... 20 Ash St., Ludlow, Ky.
A. B., Miami University, 1908

Gau, Marianne A. (*Mathematics*) ..... 2525 Gilbert Ave.
A. B., University of Cincinnati, 1919

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*First semester only

HAEHNLE, WALTER F. (*Romance Languages*) ..... 830 York St.
A. B., University of Cincinnati, 1919
HOUSER, LULU (*Education*) ..... 3550 Bevis Ave.
A. B., Oberlin College, 1908
IOLA, HYMAN (*Philosophy*) ..... 3590 Eden Ave., and 58 Hand St., Rochester, N. Y.
A. B., University of Cincinnati, 1918
KIGER, JOHN H. (*English*) ..... Lane Theological Seminary, and Wheeling, W. Va.
A. B., Maryville College, 1919
ZIMMERMAN, ELIZABETH (*History*) ..... 263 Earnshaw Ave.
A. B., University of Cincinnati, 1919

GRADUATE STUDENTS

ACOMB, HELEN JANET (*History*) ..... 5642 Ridge Ave., Pleasant Ridge
A. B., University of Cincinnati, 1911
ADAMS, APPELLONA (*Education*) ..... 3639 Mozart Ave.
B. S., University of Cincinnati, 1918
ARNOLD, HELEN ELIZABETH (*Education*) ..... 3432 Columbia Ave.
B. S., University of Cincinnati, 1918
BAUMANN, GEORGE (*Geology*) ..... 34 W. Second St., Mt. Healthy, O.
B. S., University of Chicago, 1910
BECKER, LILLIE (*Philosophy*) ..... 707 Purcell Ave.
B. S., University of Cincinnati, 1919
BEGHTEL, FLOYD ELDON (*Botany*) ..... 2604 Eden Ave.
A. B., Indiana Central University, 1912
BENEDICT, AGATHA HOPE RICE (*Romance Languages*) ..... 857 Hutchins Ave.
B. L., University of Cincinnati, 1895
BETTMAN, MARIAN ROSE ..... 3593 Bogart Ave.
A. B., Bryn Mawr, 1919
BLANK, SHELDON HAAS (*Philosophy*) ..... 857 Rockdale Ave.
A. B., University of Cincinnati, 1918
BLOOM, HENRIETTE GOLDSMITH (*English*) ..... 3589 Bogart Ave.
A. B., Smith College, 1919
BOLAN, ELIZABETH M. (*Education*) ..... 14 E. Eighth St., Covington, Ky.
A. B., University of Cincinnati, 1914
BROWN, WINFRED Q. (*Education*) ..... 3326 Orion Ave., Pleasant Ridge
B. S., North Indiana Normal, 1895; *A. M., University of Wisconsin*, 1912
BROWNING, MARJORIE MAE (*English*) ..... 911 Marion Ave., and Decatur, Mich.
A. B., Albion University, 1915
BURDGE, ALICE VIRGINIA (*Social Science*) ..... 1873 Kinney Ave.
B. S., University of Cincinnati, 1919
CHAMBERS, ENOLIA (*Education*) ..... 3182 McHenry Ave.
A. B., University of Cincinnati, 1918
CLARK, DOROTHY ELIZABETH (*English*) ..... 5543 Arnsby Place
A. B., University of Cincinnati, 1917
CLIPPINGER, VIRGINIA WELTY (*English*) ..... 4412 Erie Ave.
A. B., Western Reserve University, 1919
CONNER, MAY S. (*Education*) ..... 3242 Gilbert Ave.
Ph. B., Ohio University, 1902
CORNUELLE, HERBERT CUMMING (*Social Science*) ..... 4518 Whetzel Ave.
A. B., University of Cincinnati, 1915; *B. D., Ibid*, 1918
CUMMINS, MARY DOROTHY (*English*) ..... 2921 Woodburn Ave.
A. B., University of Cincinnati, 1914
DAVIDSON, CHARLES LOWELL (*Education*) ..... 2145 Sinton Ave.
A. B., Yale University, 1907

DOLAN, EDITH AGATHA (*Education*) ..... 3981 Lowry Ave.
B. S., University of Cincinnati, 1919
DOUGLASS, EDNA MAY (*English*) ..... 332 Rockdale Ave.
A. B., University of Cincinnati, 1919
EICHELBERGER, FREDERICK LOUIS ARTHUR (*Economics*) .... 615 Coppin Bldg., Covington, Ky.
B. S., in Economics, University of Pittsburgh, 1915
EWAN, SYLVIA (*Education*) ..... 2514 May St.
B. L., University of Cincinnati, 1896
FEUSSE, ELMER GEORGE (*Chemistry*) ..... 1906 Bigelow St.
A. B., University of Cincinnati, 1919
FLANAGAN, GRACE IRENE (*Education*) ..... 3212 Mozart Ave.
B. S., University of Cincinnati, 1918
FOSTER, PARTHENIA KATHARINE (*Social and Political Science*) ..... 3301 Clifton Ave.
B. S., University of Cincinnati, 1919
FRANZ, GEORGE FREDERICK (*Education*) ..... 2344 Clifton Ave.
B. S. in Education, Ohio University, 1914
GETZENDANNER, JESSIE (*Education*) ..... 2439 Kenilworth Ave., Norwood, O.
A. B., University of Cincinnati, 1915
GRANT, JULIA CADY (*Mathematics*) ..... 2931 Jefferson Ave.
A. B., University of Cincinnati, 1919
GRODSKY, DAVID HYMAN (*Philosophy*) ..... 824 Windham Ave.
A. B., University of Cincinnati, 1915
GROMME, EMMA (*Philosophy*) ..... 1832 Brewster Ave.
A. B., University of Cincinnati, 1917
GROSS, WILLIAM (*Biblical Literature*) ..... 1935 Eastern Ave.
A. B., University of Cincinnati, 1917
GUELKER, HERBERT (*Education*) ..... 1015 Academy Ave.
A. B., University of Cincinnati, 1912
HAEHNLE, ELMER CHRISTIAN (*Education*) ..... 830 York St.
A. B., University of Cincinnati, 1911
HAGEMEYER, ELIZABETH CHRISTINE (*Education*) ..... The Glencoe, Mt. Auburn
A. B., University of Cincinnati, 1918
HAMPTON, ROSE LENORE (*Romance Languages*) ..... Corinth, Ky.
B. S., Millersburg Female College, 1906; *A. B., University of Kentucky*, 1917
HARPER, BERTA B. (*Education*) ..... 828 Maple Ave., Newport, Ky.
A. B., University of Cincinnati, 1919
HARPER, GRACE MATHIA (*Education*) ..... 828 Maple Ave., Newport, Ky.
A. B., University of Cincinnati, 1918
HARRIS, MADELINE HENRIETTA (*Botany*) [*ELA*] ..... 245 McCormick Pl.
A.B., University of Cincinnati, 1914
HEALEY, MARIE CHARLOTTE (*Philosophy*) ..... 637 Prospect Pl.
B. S., University of Cincinnati, 1919
HECKERMANN, RUTH (*Education*) [*ELA*] ..... 642 Monroe St., Newport, Ky.
A. B., University of Cincinnati, 1918
HELMERS, RUTH VIRGINIA (*Romance Languages*) ..... 168 Kinsey Ave.
A. B., University of Cincinnati, 1919
HERMAN, CARL NATHAN (*Political Science*) ..... 2706 Woodburn Ave.
A. B., University of Cincinnati, 1918
HICKS, MADELINE (*Economics*) ..... 2425 Ingleside Pl.
A. B., Wellesley College, 1917
HILL, EDITH DURHAM (*Education*) ..... 3330 Fairfield Ave.
A. B., Miami University, 1911
HOOKE, RUTH CATHERINE (*Education*) ..... 950 Nassau St.
HORTON, FRANK OSCAR (*History*) ..... Loveland, O.
A. B., Oskaloosa College, 1910
HOTTENDORF, ELIZABETH (*Botany*) ..... 810 Richmond St.
A. B., University of Cincinnati, 1919

HUNT, ESTELLE AUGUSTA (*English*) ..... 3344 Whitfield Ave.
A. B., University of Cincinnati, 1914; *A. M., Ibid*, 1917

INSKEEP, HAROLD ELWOOD (*Education*) ..... 1810 Garrard St., Covington, Ky.
A. B., University of Cincinnati, 1914

ISSERMAN, FERDINAND MYRON (*Philosophy*) ..... 435 Ridgeway Ave.
A. B., University of Cincinnati, 1919

*JAFFE, LESTER AUER (*Political Science*) ..... 818 Hutchins Ave.
A. B., University of Cincinnati, 1917

JONES, ARTHUR DAVE ..... 1200 Hopple St.
A. B., University of Cincinnati, 1914

JONES, EFFIE MAY (*Education*) ..... Forestville, O.
A. B., Miami University, 1912

JORDAN, ELSIE (*Geology*) ..... 1643 Knowlton St.
B. S., University of Cincinnati, 1919

KAHR, JOHANNA (*English*) ..... 259 Greendale Ave.
A. B., University of Cincinnati, 1919

KAPLAN, SAMUEL S. (*Philosophy*) ..... 5 LeRoy Court
A. B., University of Cincinnati, 1916; *A. M., Ibid*, 1917

KARBLER, JOHN PHILIP (*Physics*) ..... 30 St. Clair St., and Vickery, O.
B. S., Heidelberg University, 1919

KIMBALL, ELSA PEVERLY (*English*) ..... The Parkside, Clifton
A. B., University of Cincinnati, 1919

KRAUPNER, WILLIAM (*Mathematics*) ..... 5335 Tompkins Ave., Madisonville

LANDIS, CHARLOTTE HENRIETTA (*Chemistry*) ..... Conservatory of Music
A. B., University of Cincinnati, 1919

LAWES, ESTELLA (*Philosophy*) ..... 2405 Auburn Ave.
A. B., Western Reserve University, 1910

LONG, MAXWELL BUDD (*Greek*) ..... 3551 Michigan Ave.
A. B., Kenyon College, 1905

LORENZ, ELEANOR MARY (*Geology*) ..... 1500 E. North Bend Road
A. B., University of Cincinnati, 1913

LOTTER, FREDERICK D. (*Romance Languages*) ..... 2425 McMicken Ave.
A. B., University of Cincinnati, 1910; *A. M., Ibid*, 1916

LYLE, JOSEPH WILSON (*Education*) ..... 551 Prospect Pl.
B. S. in Education, Ohio University, 1914

LYNCH, BEATRICE HOLLISTER (*Education*) ..... 48 Hollister St.
A. B., Smith College, 1916

MCGOWAN, CAROLYN LEHMAN (*Political Science*) ..... 2857 Observatory Rd.
A. B., University of Cincinnati, 1917

MCKHANN, CHARLES FREMONT, JR. (*Parasitology*) ..... Cincinnati General Hospital
A. B., Miami University, 1918

MCNUTT, HELEN GRACE (*Education*) ..... 5654 Glenview Ave.
A. B., University of Cincinnati, 1916

MARGRAF, WILLIAM AUGUST (*Chemistry*) ..... 119 Lyon St.
A. B., University of Cincinnati, 1919

MASON, EDWARD CHARLES (*Pharmacology*) ..... 2111 Burnet Ave., and Springfield, Mo.
A. B., Drury College, 1914

MICHAEL, LILLIAN (*Romance Languages*) ..... 1521 Merrimac Ave.
A. B., University of Cincinnati, 1917

MILLS, CLARENCE ALONZO (*Bio-Chemistry*) ..... 572 Terrace Ave.
A. B., University of South Dakota, 1917

MOORE, MABEL GRANT (MRS. W. E.) (*English*) ..... 18 Senator Place Apts.
A. B., University of Cincinnati, 1918

MUDGE, MARY ROSALIE (*Latin*) ..... 19 E. Eighth St., Covington, Ky.
A. B., University of Cincinnati, 1916

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*Enrolled in College of Law also.

MURPHY, ADA MARGUERITE (*English*) ..... 241 E. University Ave.
A. B., University of Cincinnati, 1907
NIELSEN, OLIVE RICHARDSON (*Philosophy*) ..... 564 Delta Ave.
A. B., University of Cincinnati, 1916
NOONAN, FRANCESCA R. (MRS. CHARLES S.) .....238 Melish Ave.
B. S., University of Cincinnati, 1917
O'BRIEN, EDNA (*English*) ..... 2721 Woodburn Ave.
A. B., University of Cincinnati, 1914
OLT, GEORGE RUSSELL (*Philosophy*) ..... 2366 Stratford Ave.
A. B., Wilmington College, 1918
OSTERBROCK, WILLIAM CARL (*Electrical Engineering*) [*ELA*] ..... 3031 Marshall Ave.
E. E., University of Cincinnati, 1918
OTTO, CARL EVERETT (*Chemistry*) ..... 1 Highway Ave., W. Covington, Ky.
A. B., University of Cincinnati, 1916
OTTO, EARL MAURICE (*Chemistry*).....1 Highway Ave., W. Covington, Ky.
A. B., University of Cincinnati, 1919
PARKER, GAIL (*Geology*) ..... 645 Linden Ave., Newport, Ky.
A. B., University of Cincinnati, 1919
PARKER, HARRIET I. W. L. (MRS. WILLIAM H.) (*Philosophy*) ..... 2 Glen Armond Ave.
B. L., Bucknell College, 1894; *A. M., University of Cincinnati*, 1910
PECK, EDITH WELD (*English*) .....The Parkside, Clifton
B. L., University of Cincinnati, 1894
PERIN, KATE PRESOCIA (*Geology*) ..... 5524 Madison Rd.
A. B., University of Cincinnati, 1908
PERSONS, PEARL BEMIS (*English*) ..... 113 Lyon St.
A. B., University of Cincinnati, 1919
PFISTER, MILDRED MARIE (*Philosophy*) ..... 3716 Maple Park Ave., Hyde Park
B. S., University of Cincinnati, 1919
PHILLIPS, RUTH L. (*Zoology*) ..... Western College, Oxford, O., and Cheshire, Mass.
Ph. B., Syracuse University; *A. M., Ibid.*
PICHEL, CHARLOTTE REICH (*Romance Languages*) ..... 360 Northern Ave.
A. B., University of Cincinnati, 1919
QUIRK, WILLIAM ALAN (*Education*) ..... 4012 Forest Ave.
A. B., University of Cincinnati, 1906
RAITT, ANNA HALL (*Botany*) ..... 1875 Fairfax Ave.
A. B., University of Cincinnati, 1911
RASCHIG, ADELE LOUISE (*Mathematics*) ..... 2535 Stanton Ave.
A. B., University of Cincinnati, 1910
REICHERT, IRVING FREDERICK (*Philosophy*) ..... 501 Carplin Pl.
A. B., University of Cincinnati, 1918
RENNER, MARTHA MILLER (MRS. O. J.) (*Romance Languages*) ..... University Court
A. B., University of Cincinnati, 1910; *Ph. D., Ibid.*, 1918
RIKER, ALBERT JOYCE (*Botany*) ..... 1916 Bigelow St.
A. B., Oberlin College, 1917
RIFFE, LAURA CASSEDY .....1802 Madison Ave., Covington, Ky.
A. B., University of Cincinnati, 1916
ROWELL, MARY EMMA (*Mathematics*) ..... 849 Hutchins Ave.
A. B., University of Cincinnati, 1907; *A. M., Ibid.*, 1910
SACHS, EUGENIE HELLMAN (*English*) ..... 932 Avondale Ave.
A. B., Wellesley College, 1919
SALKOVER, MEYER (*Mathematics*) ..... 3560 Eden Ave.
A. B., University of Cincinnati, 1917; *A. M., Ibid.*, 1919
SCHENK, JESSIE L. (*Education*) [*ELA*] ..... 126 E. Front St., Newport, Ky.
A. B., University of Cincinnati, 1919
SELLEW, GLADYS (*Economics*) ..... 1603 E. McMillan St.
A. B., University of Cincinnati, 1918

SEXTON, LELA KENNEDY (MRS.) (*Romance Languages*) ..... 3211 Jefferson Ave.
A. B., Butler College, 1919
SNYDER, JOHN WESLEY, JR. (*Education*) .....3520 Larkspur Ave., Hyde Park
A. B., University of Cincinnati, 1915
SNYDER, LOUISE STOCKMAN (MRS. JOHN W., JR.) (*Education*) ..3520 Larkspur Ave., Hyde Park
B. S., University of Cincinnati, 1915
SPALDING, ALICE AMY (*English*) ..... 1810 Young St., and Upland, Ind.
A. B., Taylor University, 1916
SPELMAN, JOHN DILLON ..... 1828 Freeman Ave.
M. D , University of Cincinnati, 1911
STANLEY, HELEN ABIGAIL (*Latin*) ..... 3576 Zumstein Ave.
A. B., Univeristy of Cincinnati, 1913; *A. M., Ibid.*, 1914
STEINER, MARY CATHERINE (*English*) ..... 3042 Taylor Ave.
A. B., University of Cincinnati, 1919
STRATE, JESSIE B. (*Geology*) ..... 5744 Bramble Ave.
B. S., University of Chicago, 1909
STRAUS, ROBERT LEE (*English*) ..... Hamilton Apts., Avondale
A. B., University of Cincinnati, 1917
STRUBBE, ALFRIDA ANNA (*Psychology*) ..... 2833 Winslow Ave.
A. B., University of Cincinnati, 1910
STUNTZ, EDNA MARY (*English*) [*ELA*] ..... 2981 Observatory Ave.
B. S., University of Cincinnati, 1919
STURWOLD, MARIE ANTOINETTE (*English*) ..... 1063 Overlook Ave.
A. B., University of Cincinnati, 1918
TALCOTT, CAROLYN RENNER (MRS. HAROLD) (*Romance Languages*) ..... University Court
A. B., Wellesley College, 1917
TELLEFSEN, MARJORIE ADELINE (*Botany*) ..... 3406 Ormond Ave., Clifton
A. B., University of Cincinnati, 1918
TOPP, BERTHA M. (*Education*) ..... 2606 Melrose Ave.
B. S., Teachers College, 1917
TRISLER, ANNA HITZFIELD (MRS.) (*History*) ..... 241 Twain Ave., Sayler Park
B. S., University of Cincinnati, 1917
VAN WINKLE, EDWIN C. (*Education*) ..... 2231 Reading Rd.
B. S., Ohio University, 1913
VAUPEL, JEAN (*Zoology*) ..... 6024 Lantana Ave.
A. B , University of Cincinnati, 1916
WABNITZ, WILLIAM SEYMOUR (*Education*) ..... 6809 Carthage Pike
A. B., Ohio State University, 1916
WALDMAN, BESSIE (*Education*) .....5835 Hamilton Ave.
A. B., University of Cincinnati, 1915
WALDMAN, GERTRUDE (*Education*) ..... 5835 Hamilton Ave.
B. S., University of Cincinnati, 1918
WALKER, EDGAR ALLEN (*History*) ..... 735 Locust St.
A. B., Miami University, 1919
WALLS, CALLIE KING (*Mathematics*) ..... 3214 W. Eighth St.
B. S., Ohio University, 1912
WARD, BERTHA EVANS (*English*) ..... The Roanoke, Clifton
A. B., University of Chicago, 1902; *A. M., University of Cincinnati*, 1917
WARD, FRANK BIRD (*Social Science*) ..... Young Men's Christian Association
Ph. B., Denison University, 1917
WHITCOMB, LAMAH E. (MRS.) (*Education*).....3815 Huntington Ave., Covington, Ky.
A. B., Georgetown University, 1910
WILLIAMS, KATHERINE MEREDITH (*English*) ..... 4425 Station Ave., Winton Place
A. B., University of Cincinnati, 1915
WULFF, DORIS (*Mathematics*) ..... 395 Terrace Ave.
A. B., University of Cincinnati, 1918
WURTZ, LOUISE B. (*English*) ..... 3025 Beekman St.
A. B , University of Cincinnati, 1904

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UNIVERSITY OF CINCINNATI RECORD

SERIES I, VOL. XVII APRIL, 1921 NO. 2, PART 6

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1921-1922

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

ISSUED QUARTERLY: JANUARY, APRIL, JULY, OCTOBER

ENTERED AS SECOND-CLASS MATTER MAY 19, 1913, AT THE POST OFFICE AT CINCINNATI, OHIO, UNDER THE ACT OF AUGUST 24, 1912

COLLEGES OF THE UNIVERSITY

GRADUATE SCHOOL

McMICKEN COLLEGE OF LIBERAL ARTS

COLLEGE FOR TEACHERS

COLLEGE OF ENGINEERING AND COMMERCE

COLLEGE OF MEDICINE

School of Nursing and Health

COLLEGE OF LAW (Cincinnati Law School)

For Announcement of the Graduate School, address:

The Director of Admissions
University of Cincinnati
Cincinnati, Ohio

UNIVERSITY OF CINCINNATI RECORD

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1921-1922

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

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CALENDAR

1921

Sept. 26-Oct. 1	Registration days for the first semester
Nov. 24-26, inc.	Thanksgiving recess

CHRISTMAS RECESS

Monday, December 19—Monday, January 2, inclusive

1922

Jan. 3, Tuesday	Classes resumed
Jan. 30-Feb. 7	First semester examinations
Feb. 13-15	Registration days for the second semester
Feb. 22, Wednesday	Washington's Birthday: a holiday
April 13-15, inc.	Easter recess
May 5, Friday	Oratorical contest for Jones Prizes
May 30, Tuesday	Memorial Day: a holiday
June 16, Friday	Second semester ends
June 17, Saturday	University Commencement Day

BOARD OF DIRECTORS

Appointed by the Mayor of Cincinnati

Alfred Mack	January,	1922
Erwin O. Straehley, M.D.	"	1923
Sanford Brown	"	1924
Edward H. Ernst	"	1925
Otto J. Renner	"	1926
Rufus B. Smith	"	1927
Robert W. Hilton	"	1928
Emil Pollak	"	1929
Arthur R. Morgan	"	1930

OFFICERS

For the Fiscal Year 1921

Rufus B. Smith	Chairman
Daniel Laurence	Clerk
Christie Wilke	Assistant Clerk

COMMITTEES

Committee on Finance: Messrs. Pollak, Renner, Morgan

Committee on Real Estate: Messrs. Brown, Morgan, Ernst

Committee on University Buildings and Grounds: Messrs. Morgan, Pollak, Ernst

Committee on Academic Affairs and Observatory: Messrs. Straehley, Hilton, Mack

Committee on Law and College of Law: Messrs. Mack, Brown, Renner

Committee on College of Medicine: Messrs. Renner, Mack, Smith

Committee on College of Engineering and Commerce: Messrs. Hilton, Brown, Straehley

ADMINISTRATIVE OFFICERS

FREDERICK CHARLES HICKS, PH.D. . . . . President of the University
Office, 10 McMicken Hall

LOUIS TRENCHARD MORE, PH.D. . . . . Dean of the Graduate School
Office, 20 Cunningham Hall

ERNEST LYNN TALBERT, PH.D. . . . . Secretary of the Faculty
Office, 2 McMicken Hall

WHITELAW REID MORRISON, A.M., M.D. . . . . Director of the Gymnasium
Office, Gymnasium Building

DANIEL LAURENCE, B.S. . . Secretary and Business Manager of the University
Office, 4 McMicken Hall

CHARLES ALBERT READ, A.B. . . . . Librarian of the University Library
Office, Van Wormer Library Building

LELIA GARVIN HARTMAN, B.L. . . . . Registrar
Office, 7 McMicken Hall

FACULTY AND INSTRUCTORS

Frederick Charles Hicks, ph.d. . . . . President of the University
Jermain Gildersleeve Porter, ph.d. . . . . Director of the Observatory and Professor of Astronomy
Harris Hancock, ph.d., sc.d. . . . . Professor of Mathematics
John Miller Burnam, ph.d. . . Professor of Latin and Romance Palaeography
Max Poll, ph.d. . . . . Professor of the Germanic Languages
Merrick Whitcomb, ph.d. . . . . Professor of History
Louis Trenchard More, ph.d. . . . . Professor of Physics and Dean of the Graduate School
Burtis Burr Breese, ph.d. . . . . Professor of Psychology
William Paxton Burris, a.m., l.h.d. . . . . Professor of Education
Stephen Elmer Slocum, b.e., ph.d. . . Professor of Applied Mathematics
Nevin M. Fenneman, ph.d. . . . . Professor of Geology and Geography
Guy Allan Tawney, ph.d. . . . . Professor of Philosophy
*Frank Wadleigh Chandler, ph.d. . . . . Professor of English and Ropes Professor of Comparative Literature
*Phillip Ogden, ph.d . . . . . Professor of Romance Languages
Martin H. Fischer, m.d. . . . . Joseph Eichberg Professor of Physiology
Henry McElderry Knower, ph.d. . . . . Francis Brunning Professor of Anatomy
Harris Miller Benedict, ph.d. . . . . Professor of Botany
Selden Gale Lowrie, ph.d. . . . . Professor of Political Science
William Buchanan Wherry, a.b., m.d. . . . . Professor of Bacteriology and Hygiene
Alfred Lawrence Hall-Quest, a.m. . . . . Professor of Education
Gustave Maurice Braune, c.e. . . . . Professor of Civil Engineering
Harry Shipley Fry, ph.d. . . . . Professor of Chemistry and Director of the Chemical Laboratory
Harry Lewis Wieman, ph.d. . . . . Professor of Zoology
Edward F. Malone, a.b., m.d. . . . . Professor of Histology
Alexander Lewis Jenkins, m.e. . . . . Professor of Mechanical Engineering
Albert Prescott Mathews, ph.d. . . . . Professor of Biochemistry
Samuel James McIntosh Allen, ph.d., Professor of Experimental Physics
Claude M. Lotspeich, ph.d. . . Professor of Comparative Philology, Department of German
Frank K. Sechrist, ph.d. . . . . Professor of Education
Robert Clyde Gowdy, ph.d. . . Professor of Physics, College of Engineering and Commerce
Henry Max Goettsch, ph.d. . . . . Professor of Inorganic Chemistry

*Absent on leave, 1921-1922

WILLIAM TUNSTALL SEMPLE, PH.D. . . . . Professor of Classics
REGINALD CHARLES MCGRANE, PH.D. . . Professor of History, College of Engineering and Commerce
RICHARD SISSON AUSTIN, M.D. . . . . Professor of Pathology
CHARLES NAPOLEON MOORE, PH.D. . . Associate Professor of Mathematics
CLARENCE DIMICK STEVENS, A.M. . . . . Associate Professor of English
HENRY G. HARTMAN, PH.D. . . . . Associate Professor of Philosophy
CLARENCE ORAN GARDNER, PH.D. . . Associate Professor of Political Science
EARL FREDERICK FARNAU, PH.D., Associate Professor of Organic Chemistry
RALPH EDWARD OESPER, PH.D., Associate Professor of Analytical Chemistry
SHIRO TASHIRO, PH.D. . . . . Associate Professor of Biochemistry
CLARENCE JAMES FOREMAN, M.S., A.M., PH.D. . . . . Associate Professor of Economics
ORVILLE TURNER WILSON, PH.D. . . . . Associate Professor of Botany
BEVERLEY BOND, JR., PH.D. . . . . Associate Professor of History
EVERETT IRVING YOWELL, PH.D. . . . . Associate Professor of Astronomy
CAREY P. MCCORD, M.D. . . . . Associate Professor of Preventive Medicine
HENRY ROBINSON SHIPHERD, PH.D. . . . . Assistant Professor of English
WALTER H. BUCHER, PH.D. . . . . Assistant Professor of Geology
OTTO CHARLES VON SCHLICHTEN, A.B. . . . . Assistant Professor of Geology
ERNEST LYNN TALBERT, PH.D. . . . . Assistant Professor of Psychology
HUBERTIS MAURICE CUMMINGS, PH.D. . . . . Assistant Professor of English
EDWARD C. DAY, PH.D. . . . . Assistant Professor of Zoology
MERTON JEROME HUBERT, A.M., Assistant Professor of Romance Languages
LEONORA NEUFFER, PH.D. . . . . Assistant Professor of Chemistry
WILLIAM A. CROWLEY, PH.D. . . . . Assistant Professor of Philosophy
IRVING H. BROWN, PH.D. . . . . Assistant Professor of Romance Languages
SELBY FRAME VANCE, A.M., D.D., LL.D. . . Lecturer on Biblical Literature
HELEN A. STANLEY, A.M. . . . . Instructor in English
E. LUCY BRAUN, PH.D. . . . . Instructor in Botany
LOUIS A. PASSARELLI, A.M. . . . . Instructor in Romance Languages
FLOYD ELDON BEGHTEL, A.M. . . . . Instructor in Botany
CLARENCE A. MILLS, PH.D. . . . . Instructor in Biochemistry
WILLARD AUSTIN KINNE, A.B. . . . . Instructor in Romance Languages
WALTER C. PHILLIPS, PH.D. . . . . Instructor in English
RAYMOND CHAMBERS, A.M. . . . . Instructor in History
CHARLES MURDOCH DISERENS, A.M. . . . . Instructor in Psychology
HAROLD FREDERIC RICHARDS, PH.D. . . . . Instructor in Physics
MIRIAM B. URBAN, A.M. . . . . Instructor in History
HOWARD L. BEVIS, A.B., LL.B., S.J.D. . . . . Instructor in Economics

ADMISSION

Admission to the Graduate School is granted to holders of a Bachelor's degree conferred by the University of Cincinnati, and to those who present documentary evidence of having received such a degree from other institutions whose requirements are substantially equivalent. Admission to the Graduate School does not, however, signify candidacy for an advanced degree.

Properly qualified students, when duly registered, may, with the approval of the heads of the departments concerned, be admitted as auditors to courses of study. No work taken by auditors may under any circumstances be counted towards a degree.

FEES AND EXPENSES

All tuition and fees required from students must be paid in advance and as a condition of registration. Registration shall not be considered as completed until all such payments have been made, and a "late registration fee" shall be added to fees not paid on the days set apart for registration. If fees are not paid promptly, the deans are authorized to exclude students from attendance upon their classes.

Fees are subject to change as conditions necessitate: such changes take effect at once and apply to students already enrolled, unless otherwise specified.

Tuition and fees are not returnable except when withdrawal from the University is caused by sickness or causes entirely beyond the control of the student. Before application for refund will be considered, it is necessary that the student shall have submitted to the Registrar notice of his withdrawal at the date of such withdrawal. Students withdrawing under discipline forfeit all rights to a return of any portion of their fees.

The full amount of tuition and fees shall be returned to students who fail of admission to the University after same have been paid. In other cases refunds, when allowed, shall be in the following proportions:

During 1st and 2d weeks	80%
During 3d and 4th weeks	60%
During 5th and 6th weeks	40%
During 7th and 8th weeks	20%

After the eighth week no refund shall be allowed, but a credit memorandum may be issued for the total amount of the tuition or fees.

When the right of a student to register as a citizen of Cincinnati is in doubt, he must raise the question at once with the Registrar, and obtain the blank provided for the purpose. He shall then present his case in writing to the proper authorities, who will pass upon the matter. No person can gain residence in Cincinnati by enrolling as a student in the University.

If a student misrepresents himself as a citizen of Cincinnati at the time of registration, he shall be assessed the sum of $10 in addition to the tuition for that semester.

TUITION FEES

Tuition in the Graduate School is free to citizens of Cincinnati; students not citizens are charged at the rate of $7.50 a credit hour a semester.

Evening Academic Courses

Tuition in the Evening Academic Courses is free (a) to all citizens of Cincinnati; (b) to all teachers* in the public schools of the city, even though they are not citizens of Cincinnati. All other teachers who are not citizens are charged tuition at the rate of $5 a course a year. Non-residents other than teachers are charged tuition at the rate of $7.50 a credit hour a semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees are charged for courses in the laboratory sciences.

Extension Courses

A fee of $5 is charged for admission to *each* winter Extension Course; $10 for admission to *each* summer Extension Course. The laboratory fee for the course in botany is $10.

Courses for Teachers*

Teachers enrolled in the Graduate School pay the regular library fee of $5 a year. Tuition is free to all teachers in the public schools of Cincinnati. All other resident and non-resident teachers are charged tuition at the rate of $5 a course a year, payable in advance.

Combination Courses

Regular students enrolled in the Graduate School may elect in the College of Medicine courses for which they receive credit in the Graduate School without the payment of additional tuition to the College of Medicine. They must, however, pay the usual laboratory fees.

Special students who are taking courses in any college for professional purposes must pay the usual rate of tuition charged by the college in which credit is received.

LABORATORY FEES

All laboratory fees are payable strictly *in advance.*

A student will not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Botany, $10 a semester

*Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

Chemistry, $15 a semester; $15 a course a summer term. ($10 a summer term for pre-medics.)

Geology, $5 a semester; $2.50 a semester for a course having but one laboratory period a week

Metallurgy, $7.50 a semester; $7.50 a summer term. (Not required of students taking chemistry.)

Physics, $10 a semester; $5 a semester for a course having but one laboratory period a week; $15 a course a summer term

Psychology, $5 a semester

Zoology, $10 a semester for each course; $15 a course a summer term

Graduate students taking laboratory courses in the College of Medicine must pay for each course $15 a semester; breakage deposit $10. (This includes surgical anatomy, bacteriology, biochemistry, histology, pathology, pharmacology, physiology.)

GRADUATION FEES

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of $10 is charged a candidate for the degree of Master of Arts, and a fee of $20 is charged for the degree of Doctor of Philosophy.

MISCELLANEOUS FEES

Gymnasium.—A gymnasium fee of $5 a year ($2.50 a semester) is charged all students in the Graduate School who elect twelve hours of work a week.

The same fee is charged all other students in the University, members of the faculty, and alumni who desire to avail themselves of the privileges of the gymnasium and the swimming pool.

Contingent.—A contingent fee of $10 a year ($5 a semester) is charged all students in the Graduate School taking twelve hours of work a week who are not citizens of Cincinnati; a fee of $5 a year ($2.50 a semester) is charged all non-resident students taking more than six hours, but less than twelve.

Library.—All students in the Graduate School must pay a library fee of $5 a year at the opening of the session.

Student Activity.—All regular day students in all the colleges of the University must pay a student activity fee of $10 a year, full amount payable the first semester, with the following exception: for students in the professional colleges who have received an undergraduate degree the payment of the fee is optional.

Late Registration.—Students who apply for registration or submit schedules of study on days other than those designated are required to pay a fee of $1.

DEPOSITS

Chemistry Breakage.—An initial breakage deposit of $10 is required of every student who registers for a laboratory course in chemistry. Furthermore, a $5 breakage deposit is required for each additional semester or summer term of laboratory work in the same school year. If a student surrenders his laboratory outfit at the end of any semester or term, an initial breakage deposit of $10 will be required when the student again registers for a laboratory course in chemistry.

Five dollars of this initial breakage deposit must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining $5 a coupon-ticket is issued to the student, with which supplies and apparatus may be obtained at the chemistry storeroom. Should this coupon-ticket become exhausted, the student must purchase a new ticket ($5) before further supplies will be issued to him at the storeroom.

A breakage deposit of $5 is required of every student who registers for a metallurgy laboratory course. This deposit is not required of students who have paid the regular $10 breakage deposit for chemistry.

Locker.—A deposit of $1 must be made for the use of a locker; of this amount 25c is retained by the University for each year's use of the locker. A student who has already made a deposit of 50c must make an additional deposit of 50c. A locker may not be transferred from one student to another.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

The D. A. R. Fellowship in American History was established in 1900 by the Daughters of the American Revolution. It yields an income of $100 a year.

The Hanna Fellowship in Physics was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is $500 a year, in addition to exemption from the payment of tuition and laboratory fees.

The Ten Baldwin Fellowships, each amounting to $500 in addition to exemption from the payment of tuition and laboratory fees, have been provided by the Francis Howard Baldwin bequest. For further information apply to the Dean of the Graduate School.

The Alliance Française Scholarship, of $300, was established in 1904 by the Alliance Française of the city of Cincinnati. It is awarded to the student in the Department of Romance Languages showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris

THE ARMSTRONG-HUNTER MEMORIAL FUND, valued at $1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund has been used to found a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

RHODES SCHOLARSHIPS.—Men who have completed their Sophomore year at the University of Cincinnati are eligible to compete for the Cecil Rhodes Scholarships, tenable for three years at Oxford University, England, with a stipend of $1,500 each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curriculum activities. Further information may be obtained from any member of the Rhodes Scholarship Committee of Selection for Ohio; Chairman, President W. O. Thompson, Ohio State University, Columbus, Ohio; Professor B. E. Schmitt, Western Reserve University, Cleveland, Ohio; Cary R. Alburn, Esq., Attorney, Garfield Bank Building, Cleveland, Ohio; Secretary, Professor Leigh Alexander, Oberlin College, Oberlin, Ohio.

In addition to the above, the University offers ten scholarships in several departments which exempt their holders from the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

For the fellowships, scholarships, and prizes of the various colleges, consult their several Announcements.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

Completion of the requirements for the Master's degree requires at least one full year's residence in the Graduate School. Acceptance in candidacy for the degree of Master of Arts shall be determined by the Advisory Committee not later than the beginning of the last semester of work. When a student's college training has been defective, or when he is registered in a professional school, engaged in teaching, or otherwise occupied so that he cannot devote his entire time to his work, the Advisory Committee shall determine how much, if at all, the one-year period should be increased.

A student desiring to become a candidate for this degree shall designate, at the time of his admission to the Graduate School, the subjects and courses which he elects to study, and shall at the same time obtain approval of his election from his Adviser (the head of the department in which he elects his major work). The student must then satisfy the Dean of the Graduate School that the courses he has elected have been approved by the heads of the departments concerned.

The courses offered for the degree of Master of Arts shall represent not less than twenty-four credit hours of graduate instruction, of which at least twelve shall be in the major subject. In case the candidate elects a major in the same department in which he has completed a major in fulfillment of the requirements for a Bachelor's degree, he may, under the direction of his Adviser, elect sufficient work in some allied department to complete the twelve credit hours. No credit is given for a course in which the student does not receive a record of "Satisfactory."

Each candidate for the Master's degree must present a thesis on a subject approved by his Adviser. The title of this thesis shall be submitted to the Dean at least six months before the degree is conferred. The thesis must be typewritten on regulation paper and be filed with the Dean before the close of the final semester of graduate study, together with a certificate of approval from the student's Adviser. The date for submitting the thesis is determined by the Adviser.

Candidates for the degree of Master of Arts are required to pass an oral examination before a committee of the faculty.

Degrees will not be conferred *in absentia*, except by special permission from the President.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

For the Doctor's degree three years of graduate study will ordinarily be required. In cases where the student's college training has been defective or he cannot devote his whole time to the work, the period of study will be longer than three years. At least the last year of study must be spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is satisfactory in character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These are known as a major and two minor subjects, not more than two of which shall be selected in one department. The candidate shall satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, constitute an advisory committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree he must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction embodied in a major and two minor subjects, thirty units of which must

be given to the major subject, and must have passed such written examination on his major and minor subjects as the Advisory Committee may indicate and an oral examination before the faculty. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment. No credit is given for a course in which the student does not receive a record of "Satisfactory."

The candidate is furthermore required to present, in such form as the Advisory Committee may determine, a thesis which gives evidence of high attainment and power of independent research. The thesis must be accepted before the candidate is allowed to take his final examinations.

All theses offered for the Doctor's degree must be filed with the Dean not later than six weeks before the close of the final semester of graduate study. Moreover, each student is required to deposit in the University library one hundred printed copies of his thesis. If the thesis is published in a journal approved by the candidate's Advisory Committee, ten printed copies may be deposited in the library. The candidate may receive his diploma before the thesis is printed, provided a typewritten copy is deposited with the Librarian and the sum of $50 with the Registrar of the University. This sum will be returned upon the presentation to the library of the required number of printed copies of the thesis.

Degrees will not be conferred *in absentia*, except by special permission from the President.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained by work done in residence at the University of Cincinnati.

INSTRUCTION

The work of each candidate for a degree shall be under the direction of an advisory committee, composed of the Dean and of the heads of the departments in which the work is taken.

The unit of instruction is one period a week for one semester.

Graduate students will receive no credit towards a degree of Master of Arts or Doctor of Philosophy for courses which are not of an advanced character. All courses for which credit is expected must be listed in the

catalogue of the Graduate School. Supplementary work must be specified in courses which are intended primarily for advanced undergraduate students; otherwise, but half credit will be allowed.

While the nature of the students' work may vary in the subjects selected, it is understood to require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as *in absentia*. No credit will be given towards a graduate degree for work done prior to the conferring of a Bachelor's degree or its equivalent.

SPECIAL ARRANGEMENTS

With the approval of the Dean of the Graduate School and their Advisers, candidates may submit the following courses taken in the Lane Theological Seminary and in the collegiate department of the Hebrew Union College in partial fulfillment of the requirements for the Master of Arts degree. Not more than twelve units may be so counted.

LANE THEOLOGICAL SEMINARY

3. Old Testament History (2 credits). Dr. Farr
5. The Psalms (2 credits). Dr. Farr
6. The Prophets (2 credits). Dr. Farr
4. Old Testament Thought (2 credits). Dr. Farr
13. Messianic Prophecy (2 credits). Dr. Farr
1. Ancient and Medieval History (4 credits). Dr. Stephens
2. Reformation History (4 credits). Dr. Stephens
3. Modern History (4 credits). Dr. Stephens

HEBREW UNION COLLEGE

1. Biblical Literature
2. Rabbinical Literature
3. Jewish Philosophical Literature

For detailed description of above courses, see catalogue of the Hebrew Union College.

COURSES OF INSTRUCTION

Courses in the Graduate School extend throughout the year, unless designated by "a" (first semester) or "b" (second semester).

ANATOMY

The number of graduate students admitted to these courses will, at present, be limited. Evidences of necessary preliminary preparation and fitness must be submitted to the professors in charge of courses.

102. Histology and Organology.—A macroscopic and microscopic analysis of the structure of the body. It is desirable that this course be taken with Course 104. If this should not be done, students will still be expected to secure a fair grasp of the gross features of parts, as well as of the finer microscopic details. (a) M., W., Th., afternoons; (b) W. and F. afternoons for the first 12 periods. Six credit hours. Dr. Malone

103. Neurological Anatomy.—Gross and microscopic structure of the nervous system, involving a study of the mechanisms which underlie its functions. (b) The last 20 periods of the semester, W. and F. afternoons. Two credit hours. Dr. Malone

104. Human Anatomy.—Study of the human body in the dissecting room, with conferences, collateral reading, drawing, etc., according to the special needs of the student. Graduate students must have had a course in elementary vertebrate embryology. (a) Tu., Th., F., and S. mornings. Six credit hours. (b) Tu., Th., F., S. mornings and M. afternoon. Seven credit hours. Dr. Knower

105. Research or Special Studies.—Arrangements for work in aspects of human anatomy, embryology, histology, or comparative and experimental lines not covered in the above courses may be made through the head of the department. Dr. Knower

ASTRONOMY

For Graduates and Undergraduates

An extra amount of computing will be required of graduate students in the following courses:

103. Spherical and Practical Astronomy.—Once a week throughout the year. Mr. Porter, Mr. Yowell

104. Celestial Mechanics.—Once a week throughout the year. Mr. Porter, Mr. Yowell

BACTERIOLOGY AND HYGIENE

The work is done on two floors of the pathologic institute. One of these is devoted to a student's laboratory and special research rooms, and a second (top floor) to special operating rooms and quarters for animals. As the central bacteriological laboratory of the hospital, the department has access for teaching purposes to everything dealing with the problem of communicable diseases which comes up in the hospital. As far as possible the medical aspects of bacteriology and animal parasitology are taught by making the student study material obtained from the wards and post-mortem rooms of the hospital.

101 and 102. General Bacteriology and the Animal Parasites of Man.—The production of disease and the relation of bacteriology to personal and public hygiene. The more important protozoa, helminths, and insects concerned in the cause and transmission of disease are studied. *First semester*, 174 hours, 5 credit hours.
Dr. Wherry, Mr. McKhann

103. Advanced Bacteriology.—Open to qualified students who wish to work on special aspects of bacteriology. Dr. Wherry

104. Research Work.—Open to specially qualified students.
Dr. Wherry

105. Lectures on Hygiene.—The personal and the municipal hygiene of transmissible diseases. *Second semester*, 16 hours, 1 credit hour.
Dr. McCord

106. Serum Diagnosis and Therapeutics.—A lecture and conference course with practical demonstrations in immunology and immunodiagnostics, including vaccines, sera, etc. Eight hours, ½ credit hour. Dr. Berghausen

107. Graduate Work in Bacteriology and Parasitology.—Open to any qualified person working for a graduate degree, or to those wishing to perfect themselves in some special line of work.
Drs. Wherry, McCord

108. Research.—Open to any qualified person after consultation with the head of the department. Credit according to number of hours elected. Drs. Wherry, McCord

109. Seminar.—Open to graduate and medical students. Special topics are assigned and the current literature reviewed. Saturday afternoons.

BIBLICAL LITERATURE

109a. Eighth Century Prophets.—For graduate credit a thesis on an assigned topic will be required. Tu., Th., 11:30-12:30.
Mr. Vance

110b. Wisdom and Apocalyptic Literature.—For graduate credit a thesis on an assigned topic will be required. Tu., Th., 11:30-12:30.
Mr. Vance

BIOCHEMISTRY

For Graduates and Undergraduates

101a. Chemistry of the Cell, Digestion, and Urine.—Lecture and recitation. Three credit hours. M., W., 8:30-9:30; F., 11:30-12:30.
Mr. Mathews

102a. Chemistry of the Cell, Digestion, and Urine.—Practical work. Three credit hours. M., W., 9:30-12:30; F., 1:15-4:15.
Mr. Mathews, Mr. Tashiro

Primarily for Graduates

104b. Internal Secretions.—For medical and graduate students. One credit hour. Tu., 11:30-12:30. Mr. Mathews

105b. Advanced Quantitative Methods of Analysis of Blood and Urine.—Six or 12 hours a week. Two, 3, or 6 credit hours. Tu., Th., 1:30-4:30. Mr. Tashiro, Mr. Mills

Prerequisite: Courses 1, 2, or equivalent

106. Physico-Chemical Methods of Biochemistry.—Conferences and laboratory 6 or 12 hours a week. Three or 6 credit hours.
Mr. Tashiro

107. Research. Mr. Mathews, Mr. Tashiro, Mr. Mills

108. Seminar.—Open to graduate and medical students. Fifteen hours. One credit hour. Department staff

109. Microchemical Methods.—For studying cell respiration. Three or 6 credit hours. Mr. Tashiro

BOTANY

To pursue advanced courses in botany the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

Requirements for Degrees

To enter upon work for the degree of Master of Arts in botany, students must have completed Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18, or their equivalents. (See Announcement of the College of Liberal Arts.) Courses "For Undergraduates and Graduates" may be counted as graduate subjects towards the degree of Master of Arts by students who have elected majors in other departments. When botany is chosen as a minor for the degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in botany. The requirements for a higher degree, when botany is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 13, 14).

For Graduates and Undergraduates

A thesis is required of all graduates who enroll in courses open to undergraduates.

105. Systematic Botany.—One lecture with one laboratory or field period of work a week on the local plants. Miss Braun
Prerequisite: Courses 1 and 2

106a. Plant Pathology.—The causes, symptoms, and prevention of plant diseases. Lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson

106b. Bacteriology.—Study of the physiology and morphology of bacteria. Lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson

110. Plant Breeding.—A course in heredity and its application to the development of improved varieties of cultivated plants. M., W., 11:30-12:30. Mr. Benedict
Prerequisite: One year of either botany or zoology

116a. Plant Histology.—Lec., M., 1:00-2:00; lab., M., W., 1:00-4:00.
Prerequisite: Two years' work in botany Mr. Beghtel

116b. Plant Cytology.—Lec., M., 1:00-2:00; lab., M., W., 1:00-4:00.
Prerequisite: Course 116a Mr. Beghtel

117. Special Problems.—One, two, or three credits. Instructor according to problem chosen.
Prerequisite: Three years' work in botany

118. Plant Physiology.—Open to Seniors and graduate students in botany. Two lectures a week. Mr. Benedict

Primarily for Graduates

120. Current Problems in Botany.—Reviews of recent researches. One or two credit hours. Mr. Benedict
Prerequisite: Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18

121. Research.—Credit according to number of hours elected.
Mr. Benedict, Mr. Wilson, Miss Braun

CHEMISTRY

Special Requirements for Higher Degrees

The Degree of Doctor of Philosophy

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject in the Graduate School must have completed the following courses or their equivalents (see Announcement of the College of Liberal Arts): 1a, 2a, 3b, 4b, 5a, 6a, 7a, 7b, 8b, 9b, 12a, 13a. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the elected branch. The completion of the prerequisite and the elected courses, however, does not satisfy the requirements to be fulfilled by the candidate for a higher degree: he must show a maturity acquired by personal intimacy with the literature and methods of chemistry.

Each candidate for an advanced degree must take an active part in chemistry seminar during his graduate residence.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the head of the department in which the major work falls. The usual minimum requirements are Courses 1a, 2a, 3b, 4b, 5a, 6a, 7a. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) are required; if one of the biological sciences has been made the major subject, Courses 8b and 9b are taken.

The Degree of Master of Arts

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

For Graduates and Undergraduates

Graduate students who register for Courses 110a—124b are required to complete additional assignments of a more advanced character than those required of undergraduates.

110a. Advanced Inorganic Chemistry.—Tu., Th., 8:30-9:30. Mr. Fry

111. Inorganic Preparations.—*First or second semester.* Mr. Oesper

112a. Physical Chemistry.—M., W., F., 10:30-11:30. Mr. Farnau

113a. Physical Chemistry, Laboratory.—F., 1:00-4:00; S., 8:30-11:30. Mr. Farnau

119a. Intermediate Organic Chemistry.—M., W., F., 9:30-10:30. Miss Neuffer

132b. Electro-Chemistry.—M., W., F., 10:30-11:30. Mr. Farnau

133b. Electro-Chemistry, Laboratory.—F., 1:00-4:00; S., 8:30-11:30. Mr. Farnau

134a. Chemistry of Colloids.—Three lectures a week. Mr. Oesper

128. Ultimate Organic Analysis. Mr. Oesper

[143a. Phase Rule.] Two exercises a week. Mr. Farnau
Omitted in 1921-1922

120b. Advanced Organic Chemistry.—M., W., F., 9:30-10:30. Mr. Farnau

121. Advanced Organic Chemistry, Laboratory.—Credit according to number of hours elected. Mr. Farnau

124b. History of Chemistry.—Three exercises a week. Mr. Fry

Primarily for Graduates

130. Research.—Problems for investigation may be chosen from the following: organic chemistry (130A), inorganic chemistry (130B), physical chemistry (130C), industrial chemistry (130D), or metallurgy (130E). Mr. Fry, Mr. Goettsch, Mr. Oesper, Mr. Farnau

During the summer of 1921 students engaged in research may enroll in the Graduate School.

140. Seminar.—M., 4:00. Mr. Fry

CIVIL ENGINEERING

124. Advanced Research Work

CLASSICS

Greek

106. Subject to be chosen by conference. Three hours. Mr. Semple

Latin

110. Latin Seminar.—Three hours. Mr. Burnam
The seminar considers Caesar, Cicero, and Vergil in this order. Author used in 1921-1922 is Caesar.

112. Conference Course.—Three hours. Mr. Semple

ECONOMICS

(The Sinton Professorship)

For Graduates and Undergraduates

In the following courses additional reading and reports will be required of graduate students.

111. Elements of Economics.—Tu., 3:00-5:00. Mr. ———

113. Development of Economic Institutions.—M., 2:00-4:00. Mr. ———

114. Economic Policies in Their Relation to Distribution.—Th., 3:00-5 00. Mr. ———

115a. Transportation.—M., W., F., 10:30-11:30. Mr. Foreman

118b. Foreign Trade Policies.—M., W., F., 10:30-11:30. Mr. Foreman

119a. Money and Banking.—M., W., F., 9:30-10:30. Mr. Foreman

120b. Monopolies and Trusts.—M., W., F., 9:30-10:30. Mr. Foreman

117a. Socialism.—Tu., Th., 2:00-3:00. Mr. Bevis

116b. Labor.—Tu., Th., 2:00-3:00. Mr. Bevis

131. Statistics.—M., 5:00-7:00. Mr. Foreman

Primarily for Graduates

112. History of Economic Theory.—Twice weekly. Mr. Foreman

121. Seminary.—Twice weekly. Mr. Foreman

123. Research.—Credit according to number of hours elected. Mr. Foreman

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EDUCATION

Those candidates for graduate degrees who intend to become instructors in education, and those who wish to qualify for supervisory or administrative positions in schools, may elect education as the major subject; other graduate students may elect education as a minor, subject to the approval of the head of the department in which the candidate's major subject is chosen.

Subject to the approval of the instructor in each case, graduate courses in education are open also to teachers who are prepared to pursue such courses in a satisfactory manner, even though such teachers be not candidates for a graduate degree.

A candidate for a graduate degree who elects education as a major ubject must have had approved undergraduate courses in education and psychology, and will be required to take Education 101. Beyond these requirements the candidate's elections are subject to the approval of the instructors in education.

101. Studies in History and Philosophy of Education.—From time to time this course will be devoted to a critical study of modern educational theories contained in the writings of educators whose influences are felt in current educational opinion and practice. A thesis will be required. Th., 4:00-5:30. Mr. Burris

1921-22. Locke and Rousseau
1922-23. Herbart and Spencer
1923-24. Froebel and Dewey

103a. Secondary Education.—Discussion of typical problems of procedure in secondary education. Tu., 4:00-6:00. Mr. Hall-Quest

103b. Educational Values of Various Studies in Secondary Education.—Tu., 4:00-6:00. Mr. Hall-Quest

104. Principles and Procedures Underlying the Development of Appreciation.—An intensive study of the psychology and technique of appreciation as applied to various subjects. S., 8:30-10:30. Mr. Hall-Quest

[107. School Supervision.] Tu., 4:00-5:30. Mr. Burris
Omitted in 1921-1922

[109a. The Junior High School Movement.] W., 4:00-6:00.
Omitted in 1921-1922 Mr. Hall-Quest

[109b. The Psychology and Supervision of Study.] W., 4:00-6:00.
Omitted in 1921-1922 Mr. Hall-Quest

[110. Experimental Education.] W., 4:00-6:00. Mr. Sechrist
Omitted in 1921-1922

112. Measurement of Results in Education.—Intended for those persons who wish to acquaint themselves with modern methods of giving tests and measuring the results of teaching. S., 10:30-12:00. Mr. Burris

114. Educational Economy.—Current educational means and procedures evaluated in view of fundamental aims and the principles of mental hygiene. The course will include original investigation of problems of management, social environment, types of character, school auxiliaries, etc., and a critical review of the so-called progressive movements in education. W., 4:00-6:00.
Mr. Sechrist

ENGLISH

COMPARATIVE LITERATURE

(Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates and Upper-Classmen

Additional reading and reports are required of graduates taking courses open to undergraduates.

112. Literary Composition.—Tu., Th., 10:30-11:30. Mr. Shipherd
Membership in Course 112 is strictly limited. Those who wish to register should first submit manuscripts to the instructor for approval.

147. History of the English Language.—Tu., Th., 8:30-9:30.
Mr. Lotspeich

110. Chaucer and his Period.—Tu., Th., 11:30-12:30. Mr. Stevens

114. English Drama to 1642.—Tu., Th., 11:30-12:30. Miss Stanley

116. Romantic Poetry and Prose (1798-1832).—Tu., Th., 9:30-10:30. (Omitting the novel) Mr. Phillips

106. Victorian Poetry.—M., W., F., 8:30-9:30. Mr. Shipherd

117. Recent English and American Poetry.—W., 4:00-6:00.
Mr. Cummings

For Graduates Only

120. European Fiction: Seminary.—M., 4:00-6:00. Mr. Stevens

GEOLOGY AND GEOGRAPHY

For Graduates and Undergraduates

105b. Field Geology and Survey Methods.—Hours and amount of credit to be arranged by agreement with each student.
Mr. Bucher

107. Mineralogy.—Lectures and laboratory. Additional determinations required for graduate credit. Th., F., 1:00-4:00.
Mr. von Schlichten

108. Introductory Paleontology.—Additional reading required for graduate credit. Mr. Bucher

112. Petrology.—Hours and amount of credit to be arranged.
Mr. von Schlichten

113. Special Work in Geology.—Credit according to number of hours elected.

116. Advanced Physiography of the United States.—Additional papers required for graduate credit. Lec., W., 4:00-6:00; S., 10:30-11:30. Mr. Fenneman

119. Historical Geology.—Lec., S., 8:30-10:30; field or lab., 10:30-12:30. Additional reading required for graduate credit.
Mr. Bucher

111. Structural Geology.—Tu., 4:00-6:00. Mr. Bucher

122. Appalachian Field Course.—Eight weeks during summer in camp in southwestern Virginia. Eight credits.
Mr. von Schlichten

GERMAN

For Graduates and Undergraduates

Additional reading is required of all graduate students who enter courses open to graduates.

105. History of German Literature to the Nineteenth Century. Special study of the classic periods of the twelfth and eighteenth centuries. M., W., F., 10:30-11:30. Mr. Poll

[110. German Composition (advanced course).] S., 9:30-11:30. Omitted in 1921-1922 Mr. Poll

[130. Glimpses of German Life and Culture.] S., 9:30-11:30. Omitted in 1921-1922 Mr. Poll

Primarily for Graduates

112. Faust.—Interpretation of both parts and study of the legend. Collateral reading and written reports. W., 4:00-6:00. Mr. Poll
Prerequisite: Course 105

[117. German Drama of the Nineteenth and Twentieth Centuries.] Tu., 4:00-6:00. Mr. Poll
Prerequisite: Course 105
Omitted in 1921-1922

116. German Novel of the Nineteenth and Twentieth Centuries. M., 4:00-6:00. Mr. Poll
Prerequisite: Course 105

[111b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] Tu., 4:00-6:00.
Prerequisite: Course 105 or 116 Mr. Poll
Omitted in 1921-1922

[107. Middle High German.] Th., 4:00-6:00. Mr. Poll
Omitted in 1921-1922

108b. Old High German.—Special attention to the development into modern German. Tu., 4:00-6:00. Mr. Lotspeich

113a. Gothic and Germanic Philology.—Tu., 4:00-6:00. Mr. Lotspeich

[126. Old Norse.] M. or F., 4:00-6:00. Mr. Lotspeich
Omitted in 1921-1922

[109. German Seminary.] Special topics in the drama. Th., 4:00-6:00.
Omitted in 1921-1922 Mr. Poll

Comparative Philology

[115. Phonetics and Linguistics.] Tu., Th., 11:30-12:30.
Open to Seniors and graduates. Mr. Lotspeich
Omitted in 1921-1922

131. Sanskrit (elementary).—Two hours. Mr. Lotspeich

[132. Sanskrit (advanced).] Two hours. Mr. Lotspeich
Omitted in 1921-1922

HISTORY

For Graduates and Undergraduates

Graduate students enrolled in mixed courses are expected to do extra work in order to receive full credit for the course.

120. Spain and Spanish America.—M., W., F., 10:30-11:30. Mr. Chambers

121. American Colonial History.—Tu., Th., 10:30-11:30. Mr. Bond

122. History of American Diplomacy.—M., W., F., 9:30-10:30. Mr. McGrane

[123. Recent American History.] M., W., F., 9:30-10:30. Omitted in 1921-1922 Mr. McGrane

125. Modern European History.—Tu., Th., 9:30-10:30. Miss Urban

Primarily for Graduates

130. Seminary in American History.—Subject for 1921-1922, *The Old Northwest*, 1789-1816. Tu., 4:00-6:00.

Note.—Certain courses in the Lane Theological Seminary and in the Hebrew Union College are accepted as minors towards a Master's degree. For list of these courses see page 16.

MATHEMATICS

For Graduates and Undergraduates

108a. Advanced Integral Calculus.—M., W., F., 11:30-12:30. Additional examples required of graduate students. Mr. Hancock

109b. Differential Equations.—M., W., F., 11:30-12:30. Mr. Hancock

[115. Theory of Equations, Including Determinants.] Mr. Hancock Omitted in 1921-1922

Primarily for Graduates

139. Theory of Numbers, Part V.—Selected chapters in the theory of algebraic numbers. Tu., Th., 4:00-6:00. Mr. Hancock

128. Theory of Functions of a Complex Variable.—M., W., 4:00-5:30. Mr. Moore

126. History and Teaching of Mathematics.—W., 4:00-5:00; F., 4:00-6:00. Mr. Slocum

140. Seminary.—Credit according to number of hours elected. Hours by special agreement. Mr. Slocum

160. Course in Reading and Research.—Credit according to number of hours elected. Mr. Moore

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MATHEMATICS (APPLIED)

Primarily for Graduates

126. History and Teaching of Mathematics.—Three hours credit Open to teachers in public schools. Mr. Slocum

111a. Fourier's Series and Spherical Harmonics.—Three hours credit. Mr. Slocum

110b. Theory of Errors and Method of Least Squares.—Three hours credit. Mr. Slocum

116a. Theoretical Mechanics (advanced course).—Three hours credit. Mr. Slocum

116b. The Mathematical Theory of Elasticity.—Three hours credit. Mr. Slocum

140. Seminary.—Research in some special topic of applied mathematics or mechanics. Credit according to number of hours elected. Hours by special arrangement. Mr. Slocum

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MECHANICAL ENGINEERING

132. Advanced Experimental Engineering

PALAEOGRAPHY

109. Foundation Course.—Deals principally with Latin texts. Survey of the various styles and bibliography down to 1500. Three hours. Mr. Burnam

112. Advanced Course.—Review of the harder styles; reading of texts in modern languages or of some particular country or domain; editing of an unpublished text. Credit variable. Mr. Burnam

111. Illustrated Books in Ancient and Medieval Times.—Runs down to about 800. Bibliography and Christian symbolism. One hour. Mr. Burnam
Given in 1920-1921.

113. Continuation of Course 111. Will run to the end of the thirteenth century. One hour. Mr. Burnam
For 1921-1922.

115. Continuation of Course 113. Will run to the close of the Middle Ages. One hour. Mr. Burnam
For 1922-1923.

PATHOLOGY

(The Mary M. Emery Chair of Pathology)

Half the floor space of the pathologic institute is devoted to the undergraduate and graduate work in pathology. In the basement of the institute are found cold storage rooms for the dead, coroner's rooms, incubators and preparation rooms. On the first floor are special laboratories for serology and clinical diagnosis by laboratory methods. The second floor is occupied by an autopsy amphitheater, administrative offices, and a students' laboratory for pathology. The top floor houses a museum and photographic rooms. Since the professor of pathology is the pathologist to the hospital, all its resources are available for teaching purposes.

The satisfactory completion of regular courses in histology, embryology, physiology, and bacteriology, is prerequisite for admission to any of the courses offered.

101. Postmortem Technique. Dr. Austin

102. General and Special Pathology.—168 hours. M., W., F., 8:30-12:00. Dr. Austin

103. Special Topics in Pathology. Drs. Cofield, Kiely

104. Clinical and Pathological Conferences.—See Department of Medicine, Announcement of College of Medicine. S., 11:00-12:00. Dr. Austin

105. Advanced Work and Research.—For qualified persons who desire to do special work under the direction of the head of the department.

PHILOSOPHY

For Graduates

While these courses include the undergraduate courses coming at the same hours, they are more intensive than the latter and involve in part another subject-matter.

102a. Logic.—Tu., Th., S., 10:30-11:30. Mr. Tawney

102b. Theory of Scientific Method.—Tu., Th., S., 10:30-11:30. Mr. Tawney

[103a. History of Philosophy from the Italian Renaissance to the Time of Kant.] M., W., F., 8:30-9:30. Mr. Tawney
Omitted in 1921-1922

[103b. History of Modern Philosophy from the Time of Kant.] M., W., F., 8:30-9:30. Mr. Tawney
Omitted in 1921-1922

104a. History of Philosophy to the Beginning of the Christian Era.—M., W., F., 8:30-9:30. Mr. Tawney

104b. History of the Philosophy of the Middle Ages.—M., W., F., 8:30-9:30. Mr. Tawney

105a. Ethics.—
Sec. I: Tu., Th., S., 10:30-11:30 Mr. Crowley
Sec. II: M., W., F., 10:30-11:30 Mr. Tawney
Sec. III: M., W., F., 1:00- 2:00 Mr. Crowley

105b. Ethical Interpretations.—
Sec. I: Tu., Th., S., 10:30-11:30 Mr. Crowley
Sec. II: M., W., F., 10:30-11:30 Mr. Tawney
Sec. III: M., W., F., 1:00- 2:00 Mr. Crowley

122. Ethics.—M., 7:30-9:30. Mr. Crowley

108a. Aesthetics.—The theory of art and the beautiful. Tu., Th., 11:30-12:30. Mr. Hartman

108b. Aesthetics.—The theory of art and the beautiful. Tu., Th., 11:30-12:30. Mr. Hartman

109. Monotheism and Modern Idealism.—Tu., 8:30-10:30. Mr. Tawney

110. History of Science.—M., W., F., 9:30-10:30. Mr. Crowley

127. Recent Tendencies in Philosophy.—W., 7:30-9:30. Mr. Hartman

133. Courses in Jewish Philosophy.—Given in the Hebrew Union College by Dr. Neumark and Dr. Kohler.

PHYSICS

For Graduates and Undergraduates

132a. Philosophy of Science.—Tu., Th., 11:30-12:30. Mr. More

132b. Philosophy of Science.—Tu., Th., 11:30-12:30. Mr. More

[103a. Theoretical Mechanics.] Tu., Th., S., 11:30-12:30. Mr. More
Omitted in 1921-1922

[118b. Theory of Electricity and Magnetism.] Tu., Th., S., 10:30-11:30. Mr. More
Omitted in 1921-1922

119a. Theory of Heat.—Tu., Th., S., 11:30-12:30. Mr. Richards

115b. Theory of Light.—Tu., Th., S., 10:30-11:30. Mr. More

Note.—The above courses may be counted towards fulfilling the requirements of a minor in physics. The courses listed below may be counted for either a major or a minor in physics.

108. Advanced Experimental Physics.—Credit according to number of hours elected. Mr. Allen, Mr. More, Mr. Gowdy

110. Seminary.—Tu., 4:00-6:00. Mr. More

133a. Discharge of Electricity through Gases.—Twice weekly. Mr. Allen

133b. Discharge of Electricity through Gases.—Twice weekly. Mr. Allen

125a. Theoretical Mechanics.—Twice weekly. Mr. Richards

134b. Lectures on Sound.—Twice weekly. Mr. Gowdy

For Graduates Only

107. Lectures on Theoretical Physics.—Twice weekly. Mr. More

109. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the mechanician. Daily. Mr. More, Mr. Allen, Mr. Gowdy

PHYSIOLOGY

(The Joseph Eichberg Professorship)

107. Research.—Open to any qualified person after consultation with the head of the department. Dr. Fischer

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POLITICAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students are expected to do a greater amount of reading than undergraduates, and such additional work as the instructor prescribes.

102a. International Law.—M., W., F., 9:30-10:30. Mr. Lowrie

103a. Development of Political Thought.—Tu., Th., 1:00-2:00. Mr. Gardner

106. Public Finance and Taxation.—M., W., F., 10:30-11:30. Mr. Lowrie

109b. European Governments.—M., W., F., 8:30-9:30. Mr. Gardner

110b. Problems of National Administration.—Tu., Th., 9:30-10:30. Mr. Gardner

111b. Municipal Administration.—M., W., F., 8:30-9:30. Mr. Lowrie

113b. Recent Political Theory.—Tu., Th., 1:00-2:00. Mr. Gardner

117a. Advanced American Government.—M., W., F., 8:30-9:30. Mr. Gardner

125. Seminar.—M., 4:00-6:00. Mr. Lowrie
To be taken only with the permission of the instructor.

PSYCHOLOGY

For Graduat s and Undergraduates

A theme and additional reading are required of all graduate students who enter courses open to undergraduates.

102a. Experimental Psychology.—M., W., F., 2:00-4:30. Mr. Diserens

102b. Experimental Psychology.—M., W., F., 2:00-4:30. Mr. Diserens

109. Mental and Physical Tests.—Laboratory methods. Two credits a semester. Tu., 3:00-5:00. Mr. Breese, Mr. Diserens

120a. Psychology of Primitive Peoples.—Th., 4:00-6:00. Mr. Talbert

120b. Psychology of Primitive Peoples.—Th., 4:00-6:00. Mr. Talbert

134a. Applied Psychology.—Forms of behavior and factors in human efficiency. Tu., Th., 1:00-2:00. Mr. Diserens

134b. Applications of Psychology in Special Fields.—Tu., Th., 1:00-2:00. Mr. Diserens

Primarily for Graduates

103. Research. Mr. Breese

104. Seminar.—A critical study of the most important problems in psychology. Th., 3:00-5:00. Mr. Breese

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ROMANCE LANGUAGES

French

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

104. French Drama in the Seventeenth Century.—Tu., Th., 9:30-10:30. Mr. ———

105. French Drama in the Nineteenth Century.—M., W., 11:30-12:30. Mr. Kinne

124. Nineteenth Century Poets.—Tu., 4:00-6:00. Mr. Passarelli

[125. Development of the French Novel.] Tu., Th., 9:30-10:30. Omitted in 1921-1922 Mr. Ogden

112. Old French.—Lectures and readings. Mr. Hubert

For Graduates Only

[119b. Old Provençal.] Mr. Ogden
Omitted in 1921-1922

Spanish

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

108. Cervantes (*Don Quixote*) and Calderon.—Th., 4:00-6:00. Mr. Brown

[122. Spanish Literature in the Sixteenth and Seventeenth Centuries.] Tu., 4:00-6:00. Mr. Brown
Omitted in 1921-1922

126. Old Spanish Readings.—Two hours weekly. Mr. Brown

128. Contemporary Spanish Literature.—Spain and Latin America. Two hours weekly. Mr. Brown
Prerequisite: Three years of college Spanish

Italian

For Graduates and Undergraduates

In the following courses additional reading is required of graduate students.

[115. Italian Literature in the Nineteenth Century.] M., W., 10:30-11:30. Mr. Passarelli
Omitted in 1921-1922

117. Italian Prose Composition.—Conversation; commercial prose; composition. M., W., 10:30-11:30. Mr. Passarelli
Alternates with Course 115.

[119. Italian Renaissance.] Dante: *Vita Nuova*; *Divina Commedia*; Petrarch: *Canzoniere*. Two hours weekly.
Omitted in 1921-1922

121. Italian Chivalric Romance.—Tasso: *Ariosto Boiardo*. Two hours weekly.
Alternates with Course 119.

SOCIAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students will be required to do a greater amount of reading than undergraduates, and such other additional work as may be prescribed by the instructor.

106. Social Pathology.—M., W., 9:30-10:30. Mr. ———

107. Principles of Social Reconstruction.—Tu., Th., 10:30-11:30. Mr. ———

108. Comparative Social Theories.—M., W., 10:30-11:30. Mr. ———

109. Social Problems.—M., W., 11:30-12:30. Mr. ———

120. Seminar.—M., 1:00-3:00. Mr. ———

ZOOLOGY

To pursue advanced courses in zoology, the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

Requirements for Degrees

To enter upon work for the degree of Master of Arts in zoology, students must have completed Courses 1, 2, 5, 17a, 18a, 13a, 14a, 19b, 20b, or their equivalents. (See Announcement of the College of Liberal Arts.) Courses under the heading "For Undergraduates and Graduates" may be counted as graduate subjects with full credit towards the degree of Master of Arts by students who have elected majors in other departments. The requirements for a higher degree, when zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 13, 14).

For Graduates and Undergraduates

110a. Microscopical Technique.—Tu., Th., 9:30-12:30. Mr. Wieman

110b. Cytology.—Tu., Th., 9:30-12:30. Mr. Wieman

118a. Comparative Anatomy of Vertebrates.—M., W., 1:00-4:00. Mr. Day

120b. Embryology of Vertebrates.—M., W., 1:00-4:00. Mr. Day

129. Advanced Zoology.—Two or three credits. Mr. Wieman, Mr. Day

Primarily for Graduates

131. Research. Mr. Wieman

132. Seminary.—Reading and discussions of papers in zoological journals. One credit. M., 4:00. Mr. Wieman

REGISTRATION OF STUDENTS, 1920-1921

Abbreviations

Any one of the following abbreviations placed beside a student's name indicates tha he is taking work in the college designated as well as in the college in which he is listed:

CC	College of Commerce
ELA	Evening Courses in the College of Liberal Arts
LA	College of Liberal Arts
LA—D&E	Day and Evening Courses in the College of Liberal Arts
MC	College of Medicine
TC	College for Teachers
EC	College of Engineering
CL	College of Law
G	Graduate School
D	Listed in more than one college

Hanna Fellow in Physics

Karbler, John Philip (*Physics*) ..... 30 E. St. Clair St., and Vickery, O
B. S., Heidelberg University, 1919

D. A. R. Fellow in American History

Finney, Frank Burnham ..... 1835 Hewitt Ave

Baldwin Fellows

*Bell, William Howard (*Bacteriology*) ..... 1803 Williams Ave., Norwood, O.
A. B., Indiana State Normal College, 1918; *A. M., University of Indiana*, 1918
Buttenwieser, Hilda (*Latin*) ..... 252 Loraine Ave.
A. B., Bryn Mawr College, 1920
Crawford, Stanton Chapman (*Zoology*) ..... 2765 Markbreit Ave.
A. B., Bethany College, 1918
(*D*) Feld, Jacob (*Civil Engineering*) [*EC*] .....582 Herkimer St., Brooklyn, N. Y., and
B. S., College of the City of New York, 1918 3348 Burnet Ave.
Soller, Walter (*Mechanical Engineering*) ..... 2415 Talbott Ave.
M. E., University of Cincinnati, 1917
Straus, Robert Lee (*English*) ..... Hamilton Apts., Avondale
A. B., University of Cincinnati, 1917; *A. M., ibid.*, 1920
Walker, Robert Coulter (*Biochemistry*) ..... 2515 Auburn Ave
A. B., University of the South, 1915; *A. M., ibid.*, 1916

Dupont Scholar

Donnelly, Joseph Lawrence (*Chemistry*) ..... 291 Mt. Pleasant Ave., Ft. Thomas, Ky
A. B , University of Cincinnati, 1917; *A. M., ibid.*, 1919

University Scholars

Baker, Williametta (*Latin*)..... 1015 Boone St., Newport, Ky
A. B., University of Cincinnati, 1920
†Binstock, Louis (*Philosophy*).....510 Union St
A. B., University of Tennessee, 1916
†Cook, Walter A. (*Chemistry*) .....Fourth and Sycamore Sts., Hamilton, O
A. B., University of Cincinnati, 1921

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*First semester only
†Second semester only

CORD, HELEN LAURA (*English*) ..... 1950 Hopkins Ave., Norwood, O.
Ph. B., Denison University, 1917
DEBECK, ALICE ELAINE (*Latin*) ..... 1850 Kinney Ave.
A. B., University of Cincinnati, 1920
*EVERSULL, BESS MARIE (*Mathematics*) ..... 414 McGregor Ave., Elmwood Place, O.
A. B., University of Cincinnati, 1921
OTTO, CARL EVERETT (*Chemistry*) ..... 1 Highway Ave., Covington, Ky.
A. B., University of Cincinnati, 1916; *A. M., ibid.*, 1920

GRADUATE STUDENTS

ALTAMER, LAURA MCNUTT (*English*) ..... 5707 Lantana Ave.
A. B., University of Cincinnati, 1919
ASHBROOK, HENRIETTE (*Romance Languages*) ..... 2 Hedgerow Lane
A. B., University of Cincinnati, 1920
AUSTIN, RUTH ANN (*Mathematics*) ..... 2311 Burnet Ave.
A. B., Mt. Holyoke College, 1919
AXLINE, ELEANOR (*English*) ..... 8 The Priscilla, Hyde Park
A. B., University of Cincinnati, 1921
BANCROFT, JUNE SEIFRIED (*English*) .....617 Glenwood Ave.
B. S., University of Cincinnati, 1917
BARCLAY, WADE CRAWFORD (*Education*) ..... 2207 Burnet Ave.
Ph. B., University of Iowa, 1899; *B. D., University of Chicago*; *D D., Simpson College*
BECKER, LILLIE (*Philosophy*) ..... 707 Purcell Ave.
B. S., University of Cincinnati, 1919
BEGHTEL, FLOYD ELDON (*Botany*) [*ELA*] .....2604 Eden Ave.
A. B., Indiana Central University, 1912; *A. M., Indiana University*, 1917
BEJACH, HELEN ANN (*History*) ..... 311 Hearne Ave.
A. B., University of Cincinnati, 1920
BEVIS, ALMA MURRAY (MRS. HOWARD L.) (*Comparative Literature*).....3924 Floral Ave.,
A. B., University of Cincinnati, 1909 S. Norwood, O.
(*D*) BOGEN, EMIL (*Physiological Chemistry*) [*MC*] ..... 857 Blair Ave.
A. B., University of Cincinnati, 1920
BOONE, WALLACE WILLIAM (*Metallurgy*) ..... 2372 Park Ave.
Ch. E., University of Cincinnati, 1919
BOYLE, REBECCA HOPKINS (*Psychology*) ..... 520 E. Fourth St.
A. B., University of Cincinnati, 1908
BRAAM, MAXIMILIAN (*Germanic Languages*) ..... 3449 Lyleburn Place
A. B., University of Cincinnati, 1906; *A. M., ibid.*, 1913
BRILL, WALTER HENRY (*Mathematics*) ..... 2215 Washington Ave., Norwood, O.
A. B., University of Cincinnati, 1916
BROKAW, AUGUST (*Romance Languages*) ..... 3558 McHenry Ave.
A. B., University of Cincinnati, 1920
BROTTON, BEULAH (*Education*) ..... 127 Huntington Place
A. B., University of Cincinnati, 1921
BURKE, ALMA (*Education*) ..... 4309 Greenlee Ave., St. Bernard, O.
A. B., University of Cincinnati, 1919
BUSCH, GLADYS HELEN (*Latin*) ..... 271 Gilman St.
A. B., University of Cincinnati, 1920
BUTTENWIESER, PAUL (*Psychology*) ..... 252 Loraine Ave.
A. B., University of Cincinnati, 1917
BYERS, FRANK RAWLEY (*English*) ..... Terrre Haute, Ind., and Central Y. M. C. A.
A. B., University of Cincinnati, 1918
CHOU, MING-CHENG (*Mechanical Engineering*)....464 Hongtek Lee, Shanghai, China, and
S. B., Massachusetts Institute of Technology, 1920 Central Y. M. C. A.

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*Second semester only

CLARK, PAUL BURROUGHES (*Biblical Literature*) ..... Lane Seminary
A. B., University of Cincinnati, 1919

DAVIS, HARRY E. (*Education*) ..... 2044 Elm Ave., Norwood, O.
A. B., Wittenberg College, 1914

DAVIS, HELEN GORMAN (*Comparative Philology*) ..... 287 Earnshaw Ave.
A. B., Wells College, 1911

DICE, MARGUERITE (*English*) ..... 2457 Maplewood St.
A. B., Goucher College, 1905

DOHERTY, MURPHY JAMES (*Botany*) ..... 429 Riddle Road
B. Sc. Agriculture, Ohio State University, 1913

DOLAN, EDITH AGATHA (*English*) ..... 3981 Lowry Ave.
B. S., University of Cincinnati, 1919

(*D*) DORST, STANLEY (*Biochemistry*) [*MC*] ..... 2515 Auburn Ave.
A. B., Wittenberg College

DRACH, HARVEY EDWARD (*English*) ..... 2200 Auburn Ave.
A. B., University of Cincinnati, 1920

ELBERG, ETTA LOUISE (*Zoology*) ..... 510 Walnut St., Elmwood Place, O.
B. S., University of Cincinnati, 1917

ELLIN, DOROTHY (*English*) ..... 1028 Valley Lane, Avondale
A. B., Wellesley College, 1920

ELLIOTT, ADALINE HALLOCK (*English*) ..... 20 Ash St., Ludlow, Ky.
A. B., Miami University, 1908

ERMERT, HETTIE C. (*German*) ..... Eighth and Overton Sts., Newport, Ky.
A. B., University of Cincinnati, 1920

FEUSSE, ELMER GEORGE (*Physical Chemistry*) ..... 1906 Bigelow St.
A. B., University of Cincinnati, 1919; *A. M., ibid.*, 1920

FLANNERY, HELEN JULIA (*History*) ..... 1712 Madison Road
A. B., University of Cincinnati, 1919

FLESSA, HERBERT LUTHER (*Education*) ..... 237 Emming St.
A. B., University of Cincinnati, 1912

FOLEY, IMOGENE (*English*) ..... 4403 Glenway Ave.
B. S., University of Cincinnati, 1919

FRANZ, GEORGE FREDERICK (*Education*) ..... 2344 Clifton Ave.
B. S. in Education, Ohio University, 1914

FREIBERG, JOSEPH A. (*Biochemistry*) ..... 3577 Alaska Ave.
A. B., Harvard University, 1920

FUSON, HENRY HARVEY (*Education*) ..... 1920 Garrard St., Covington, Ky.
B. S., University of Cincinnati, 1920

FUSSHIPPEL, MARTHA (*History*) ..... 2556 Moorman Ave.
A. B., University of Cincinnati, 1921

GOETTSCH, MARIANNE (*Chemistry*) ..... 3340 Bishop St.
A. B., University of Cincinnati, 1917; *A. M., ibid.*, 1918

GRAY, GEOFFREY ARTHUR (*Chemistry*) ..... 3537 Trimble Ave.
A. B., University of Cincinnati, 1902; *A. M., ibid.*, 1904

HAEHNLE, ELMER CHRISTIAN (*Education*) ..... 830 York St.
A. B., University of Cincinnati, 1911

HAEHNLE, WALTER FEID (*English*) ..... 830 York St.
A. B., University of Cincinnati, 1919

HAGEMEIER, ELIZABETH CHRISTINE (*Education*) ..... 25 The North Roslyn, Clifton
A. B., University of Cincinnati, 1918

HALL, RUTH E. (*Education*) ..... 541 Terrace Ave.
A. B., University of Cincinnati, 1912

HARPER, BERTA B. (*English*) ..... 828 Maple Ave., Newport, Ky.
A. B., University of Cincinnati, 1919

HECKERMANN, RUTH (*Education*) ..... 642 Monroe St., Newport, Ky.
A. B., University of Cincinnati, 1918

HOLMAN, MARION WORKUM (*History*) ..... 9 Cumberland Apts., Avondale
A. B., University of Cincinnati, 1920

HOOKE, RUTH CATHERINE (*Education*) ..... 950 Nassau St.
A. B., University of Cincinnati, 1920

HOOKER, EDITH PRATT (*History*) ..... 3639 Reading Road
A. B., Vassar College, 1913

HOPPE, HERMINA (*English*) .....6311 Grand Vista Ave., Pleasant Ridge
A. B., University of Cincinnati, 1921

HORTON, FRANK OSCAR (*History*) ..... 4608 Simpson Ave.
A. B., Oskaloosa College, 1910; *A. M., University of Cincinnati*, 1920

HOSHAW, CHRISTINE (*English*) ..... 249 W. McMillan St.
A. B., University of Cincinnati, 1921

HOUK, RAYMOND AARON (*English*) ..... 1114 Draper St.
A. B., Wittenberg College, 1911; *A. M., ibid.*, 1914

HUBERT, MERTON JEROME (*Romance Languages*) ..... The Delmoor, Clifton
A. B., Cornell University, 1913; *A. M., ibid.*, 1914

HULICK, MAY PERIN (*Education*) ..... 830 Hutchins Ave.
B. S., University of Cincinnati, 1918

HUNT, ESTELLE AUGUSTA (*English*) ..... 3344 Whitfield Ave.
A. B., University of Cincinnati, 1914; *A. M., ibid.*, 1917

IOLA, HYMAN (*Philosophy*) ..... 58 Hand St., Rochester, N. Y., and 3590 Eden Ave.
A. B., University of Cincinnati, 1918

IRWIN, N. MILDRED (*Botany*) ..... 6405 Roe St.
A. B., University of Cincinnati, 1920

ISAACS, MOSES LEGIS (*Chemistry*) ..... 3264 Delaware Ave.
A. B., University of Cincinnati, 1921

JAMISON, LAURA (*English*) ..... Harrods, O., and 219 Cooper Ave., Lockland
B. Sc., Ohio Northern University, 1918

JOHNSON, CHARLES WILLIAM (*Education*) ..... 3968 Regent Ave., Norwood, O.
B. S. in Education, University of Cincinnati, 1918

JOHNSTON, JULIA WULSIN (*Latin*) ..... 12 The Ortiz, E. Fourth St.
A. B., Western College for Women, 1917

JORDAN, MARGARET HALL (*Psychology*) [*ELA*]. .817 Mt. Hope Road, and 231 McCormick Pl.
B. S., University of Cincinnati, 1919

KAHR, JOHANNA (*English*) ..... 259 Greendale Ave.
A. B., University of Cincinnati, 1919

KAI, SOTARO (*Biochemistry*) ..... Miyazaki, Japan, and 275 Loraine Ave.
M. D., Nagasaki Government Medical College, Japan, 1916

KAMM, LEONA CARRIE (*Political Science*) [*ELA*] ..... 8354 Anthony Wayne Ave., Hartwell
B. S., University of Cincinnati, 1916

KEMP, GERTRUDE ELIZABETH (*Political Science*) ..... 244 Kearney Ave.
A. B., University of Cincinnati, 1920

KEMP, JENNIE HARRIET (*History*) ..... 5166 Broermann Ave., St. Bernard
B. S., University of Cincinnati, 1919

KERSTING, EMMA SOPHIA (*Mathematics*) ..... 3936 Dickson Ave.
A. B., University of Cincinnati, 1904; *A. M., ibid.*, 1912

KIENZLE, ETHEL GRACE (*History*) ..... 907 Hopkins St.
B. S., University of Cincinnati, 1919

KINNEY, ETHEL (*Psychology*) [*CC*] [*ELA*] ..... 3226 Woodburn Ave.
A. B., Wellesley College, 1920

KNAPP, JOHN FRANKLIN (*Philosophy*) .....1810 Young St.
A. B., University of Cincinnati, 1920

KRAMER, MARY ELIZABETH (*History*) ..... 6264 Corbly Road
A. B., University of Cincinnati, 1920

KRAUPNER, WILLIAM (*Mathematics*) ..... 4106 Sherwood Ave., Madisonville

KRONACHER, REGINE JOAN (*Physiology*) ..... 765 Greenwood Ave.
A. B., Wellesley College, 1916

(*D*) LANDIS, CHARLOTTE HENRIETTA (*Chemistry*) [*ELA*] [*MC*]....Conservatory of Music,
A. B., University of Cincinnati, 1919 Mt. Auburn
(*D*) LEE, OLIVE PEARL (*Biochemistry*) [*MC*].....Fredericktown, O., and 58 Hollister St.
A. B., Ohio University, 1919
LYLE, JOSEPH WILSON (*Education*) ..... 1014 Chapel St.
B. S. in Education, Ohio University, 1914
LYNCH, BEATRICE HOLLISTER (*Education*) .....48 Hollister St.
A. B., Smith College, 1916
MCDEVITT, MARY ELEANOR (*English*) ..... 541 Hale Ave.
A. B., University of Cincinnati, 1920
(*D*) MCKHANN, CHARLES FREMONT (*Parasitology*) [*MC*] ..... 2329 Highland Ave.
A. B., Miami University, 1918
MCNUTT, WALTER SCOTT (*Philosophy*) ..... Lane Seminary
B. L., Arkansas Cumberland College; *A. B., University of Texas*, 1918; *A. M., ibid.*, 1919
MASON, EDWARD CHARLES (*Pharmacology*) .....Springfield, Mo., and 3310 Elland Ave.
A. B., Drury College, 1914
MILLER, CARY SAMUEL (*Education*) ..... 2518 Norwood Ave., Norwood, O.
A. B., Miami University, 1909
NIPPERT, ELEONORE CATHRINE (*German*) ..... 4 The Brookline
A. B., University of Cincinnati, 1903; *A. M., ibid.*, 1915
NOONAN, FRANCESCA R. (*German*) ..... 238 Melish Ave.
B. S., University of Cincinnati, 1917
OGEL, JACOB JESSE (*Chemistry*) .....3561 Wilson Ave.
A. B., University of Cincinnati, 1921
O'HARA, ETTA MARIE (*Education*) ..... 4434 Ashland Ave.
A. B., University of Cincinnati, 1914
OLT, RUSSELL (*Philosophy*) ..... 2366 Stratford Ave.
A. B., Lebanon University, 1917; *Wilmington College*, 1918; *A. M., University of Cincinnati*, 1920
D'ORLEY, GEZA ELEMIR (*Chemistry*) ..... 135 E. Canal St.
A. B., University of Berlin, 1920; *A. M., ibid.*, 1920
OSTERBROCK, WILLIAM CARL (*Electrical Engineering*) [*ELA*] ..... 3031 Marshall Ave.
E. E., University of Cincinnati, 1918
PACE, ANNA LEE ..... Conservatory of Music
PADDACK, MARY HELEN (*Education*) ..... 626 Hawthorne Ave.
A. B., University of Cincinnati, 1920
PFEFFERKORN, BLANCHE (*Anatomy*) ....2040 Brookfield Ave., Baltimore, Md., and Cin-
B. S., Columbia University, 1916 cinnati General Hospital
PHILLIPS, VIRGINIA LYSLE (*Geology*) [*ELA*] ..... 705 York St., Newport, Ky.
A. B., University of Cincinnati, 1920
PLUCKEBAUM, DOROTHY E. (*Education*) ..... 4711 Loretta Ave.
A. B., University of Cincinnati, 1916
QUIRK, WILLIAM ALAN (*Education*) ..... 1641 Clayton St.
A. B., University of Cincinnati, 1906
RAINE, PAULINE L. (*English*) ..... 6363 Montgomery Rd., Pleasant Ridge
A. B., University of Cincinnati, 1920
RAUM, CLARA MARGARET (*Education*) ..... 321 Erkenbrecher Ave.
B. L., University of Cincinnati, 1899
ROBB, LOUISE CHERRY (*English*) ..... Glendale, O.
Ph. B., Chicago University, 1913
ROBERTS, GEORGE ELLIS (*Philosophy*) ..... 3517 Cornell Place
A. B., Drake University, 1902
ROETKEN, EMMA LOUISE ..... 71 E. Eleventh St., Covington, Ky.
A. B., University of Cincinnati, 1916
ROWE, ELSIE JORDAN (*Geology*) ..... 1643 Knowlton St.
B. S., University of Cincinnati, 1919

ROWELL, MARY EMMA (*Mathematics*) ..... 849 Hutchins Ave.
A. B., University of Cincinnati, 1907; *A. M., ibid.*, 1910

ROWER, ALICE MARY (*English*) ..... Cleveland, O., and Third and Lytle Sts.
A. B., Ohio State University

RYAN, GRACE MARIAN (*Mathematics*) .....1420 Chase St.
A. B., University of Cincinnati, 1920

SAKURAI, KIKUZO (*Biochemistry*) ..... Tokyo, Japan, and 3240 Burnet Ave.
M. D., Chiba Government Medical College, Japan, 1916

SALKOVER, MEYER (*Mathematics*) ..... 17 Juergens Ave.
A. B., University of Cincinnati, 1917; *A. M., ibid.*, 1919

SANDERS, ADELAIDE WILHELMINE (*Mathematics*) ..... 3555 St. Charles Place
A. B., University of Cincinnati, 1916; *A. M., ibid.*, 1917

SANDERS, ETHEL (*Mathematics*) ..... 2918 Montana Ave.
A. B., University of Cincinnati, 1907; *A. M., ibid.*, 1913

SCHEUING, MINNA (*English*) ..... 1756 Hanfield St.
B. S., University of Cincinnati, 1920

SCHMIDT, VICTOR FREDERICK (*Education*) ..... 219 E. 3d St., Covington, Ky.
A. B., Miami University, 1917

SCHROEDER, ESTHER LYDIA (*Education*) .....425 Ridgeway Ave.
A. B., University of Cincinnati, 1915

SELLEW, GLADYS (*Economics*) ..... 1603 E. McMillan St.
A. B., University of Cincinnati, 1918; *B. S., ibid.*, 1920

SHAFFER, HERBERT (*Economics*) [*ELA*] ..... 1355 Cryer Ave.
A. B., University of Cincinnati, 1913; *LL. B., ibid.*, 1917; *B. S., ibid.*, 1920

SLUTZ, ELLA JEANNETTE (*History*) ..... Clovernook, Mt. Healthy, O.
A. B., University of Cincinnati, 1920

SMITH, BENJAMIN FRANKLIN (*Political Science*) ..... 426 Richmond St.
A. B., University of Cincinnati, 1920

SMITH, ELIZABETH BALDWIN (*History*) ..... 1805 Madison Road
A. B., Bryn Mawr College, 1915

SMITH, JOHN WESLEY (*Education*) ..... Williamsburg, O.
Pg. B., Valparaiso University, 1918; *A. B., Wilmington College*, 1920

SNUGGS, HAROLD HEBINGER (*Biochemistry*) ..... Ridgecrest, N. C., and 3530 Beldare Ave.
B. S., Georgetown College, 1920

SPORING, EDWARD FRANKLIN (*Education*) ..... Newport, Ky.
A. B., Wilmington College, 1920

STANLEY, HELEN ABIGAIL (*Latin*) ..... 3576 Zumstein Ave.
A. B., University of Cincinnati, 1913; *A. M., ibid.*, 1914

STEINAU, STELLA (*Romance Languages*) ..... 3445 Mooney Ave.
A. B., University of Cincinnati, 1917

STEINER, MARY CATHERINE (*English*)..... 3042 Taylor Ave.
A. B., University of Cincinnati, 1919

STEPHANS, DOROTHY MARIE (*Classics*) ..... 3048 Cleinview Ave.
A. B., University of Cincinnati, 1921

STEWART, ISABELLA (*Education*) ..... 7 Park Row, Mt. Auburn
A. B., University of Cincinnati, 1915

SUGATA, HIKOGO (*Biochemistry*).....Tokyo, Japan, and 3450 Harvey Ave.
M. D., Tokyo Charity Hospital Medical College, 1918

SULLIVAN, JANE MILLER (*English*) ..... 2315 Krouse Ave.
A. B., University of Cincinnati, 1920

SWANK, GERTRUDE (*Education*) .....Newark, O., and Anna Louise Inn
A. B., Ohio Wesleyan University, 1916

SWING, CATHARINE LOUISE (*Romance Languages*) .....6230 Robinson Rd., Pleasant Ridge
A. B., University of Cincinnati, 1920

TANGEMAN, ELSIE (*Education*) ..... 2815 Burnet Ave.
A. B., University of Cincinnati, 1910

TANGEMAN, NORMA ROST (*English*) ..... 1601 E. McMillan St.
A. B., University of Cincinnati, 1917
THOMAS, MARGARET KEARSEY (*Philosophy*) ..... 5 Garfield Place
A. B., University of Cincinnati, 1916
TSCHUDI, ERWIN WILLIAM (*Physics*) ..... 2931 Jefferson Ave.
A. B., University of Cincinnati, 1920
TYREE, DORA (*Anatomy*) ..... 112 Malvern Place
A. B. University of Cincinnati, 1921
(*D*) VAN FLEET, HENRY BELLIS (*Engineering*) [*EC*] ..... 752 E. Epworth Ave.
A. B., Harvard University, 1920
WABNITZ, WILLIAM SEYMOUR (*English*) ..... 6809 Carthage Pike
A. B., Ohio State University, 1916
WALDMAN, BESSIE (*English*) ..... 5835 Hamilton Ave.
A. B., University of Cincinnati, 1915
WALKER, EDGAR ALLEN (*History*) ..... Loveland, O.
A. B., Miami University, 1919
WEINBERGER, JULIETTA (*Psychology*) ..... 867 Hutchins Ave.
A. B., University of Cincinnati, 1918
WHITAKER, MARGARET HELEN (*Political Science*) .....4419 Carnation Ave.
A. B., Smith College, 1918
WILLIAMS, AUBREY WILLIS (*Philosophy*) ..... 1558 Ruth Ave.
A. B., University of Cincinnati, 1920
WILLIS, LAURA FREDERICA (*Education*) ..... 809 Main St., Covington, Ky.
A. B., University of Cincinnati, 1920
WOLSDORF, HENRY ADOLPH (*Mechanical Engineering*) ..... 2329 Flora St.
M. E., University of Cincinnati, 1919
WOOD, ELIZABETH MARSHALL (*Education*) ..... Ft. Thomas, Ky.
A. B., Smith College, 1909
WULFF, DORIS (*Mathematics*) ..... 395 Terrace Ave.
A. B., University of Cincinnati, 1918

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SERIES I, VOL. XVIII APRIL, 1922 No. 2, PART 4

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1922-1923

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

ISSUED QUARTERLY: JANUARY, APRIL, JULY, OCTOBER

ENTERED AS SECOND-CLASS MATTER MAY 19, 1913, AT THE POST OFFICE
AT CINCINNATI, OHIO, UNDER THE ACT OF AUGUST 24, 1912

COLLEGES OF THE UNIVERSITY

GRADUATE SCHOOL

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UNIVERSITY OF CINCINNATI RECORD

THE GRADUATE SCHOOL

ANNOUNCEMENT FOR

1922-1923

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

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Registration of Students, 1921-1922 40

CALENDAR

1922

Sept. 25-Oct. 7	Registration days for the first semester
Nov. 23-25, inc.	Thanksgiving recess

CHRISTMAS RECESS

Monday, December 18—Monday, January 1, inclusive

1923

Jan. 2, Tuesday	Classes resumed
Jan. 29-Feb. 6	First semester examinations
Feb. 12-24	Registration days for the second semester
Feb. 22, Thursday	Washington's Birthday: a holiday
April 12-14, inc.	Easter recess
May 4, Friday	Oratorical contest for Jones Prizes
May 30, Wednesday	Memorial Day: a holiday
June 15, Friday	Second semester ends
June 16, Saturday	University Commencement Day

BOARD OF DIRECTORS

Appointed by the Mayor of Cincinnati

Erwin O. Straehley, M.D.	January,	1923
Sanford Brown	"	1924
Edward H. Ernst	"	1925
Otto J. Renner	"	1926
Rufus B. Smith	"	1927
Robert W. Hilton	"	1928
Emil Pollak	"	1929
Arthur R. Morgan	"	1930
Alfred Mack	"	1931

OFFICERS

For the Fiscal Year 1922

Rufus B. Smith	Chairman
Daniel Laurence	Clerk
Christie Wilke	Assistant Clerk

COMMITTEES

Committee on Finance: Messrs. Pollak, Renner, Morgan

Committee on Real Estate: Messrs. Brown, Morgan, Ernst

Committee on University Buildings and Grounds: Messrs. Morgan, Pollak, Ernst

Committee on Academic Affairs and Observatory: Messrs. Straehley, Hilton, Mack

Committee on Law and College of Law: Messrs. Mack, Brown, Renner

Committee on College of Medicine: Messrs. Renner, Mack, Smith

Committee on College of Engineering and Commerce: Messrs. Hilton, Brown, Straehley

ADMINISTRATIVE OFFICERS

FREDERICK CHARLES HICKS, PH.D. . . . . President of the University
Office, 10 McMicken Hall

LOUIS TRENCHARD MORE, PH.D. . . . . Dean of the Graduate School
Office, 20 Cunningham Hall

ERNEST LYNN TALBERT, PH.D. . . . . Secretary of the Faculty
Office, 2 McMicken Hall

WHITELAW REID MORRISON, A.M., M.D. . . . . Director of the Gymnasium
Office, Gymnasium Building

DANIEL LAURENCE, B.S. . . Secretary and Business Manager of the University
Office, 4 McMicken Hall

CHARLES ALBERT READ, A.B. . . . . Librarian of the University Library
Office, Van Wormer Library Building

LELIA GARVIN HARTMAN, B.L. . . . . Registrar
Office, 7 McMicken Hall

FACULTY AND INSTRUCTORS

Frederick Charles Hicks, ph.d. . . . . President of the University
Jermain Gildersleeve Porter, ph.d. . . . . Director of the Observatory and Professor of Astronomy
Harris Hancock, ph.d., sc.d. . . . . Professor of Mathematics
Max Poll, ph.d. . . . . Professor of the Germanic Languages
Merrick Whitcomb, ph.d. . . . . Professor of History
Louis Trenchard More, ph.d. . . . . Professor of Physics and Dean of the Graduate School
Burtis Burr Breese, ph.d. . . . . Professor of Psychology
William Paxton Burris, a.m., l.h.d. . . . . Professor of Education
Nevin M. Fenneman, ph.d. . . . . Professor of Geology and Geography
Guy Allan Tawney, ph.d. . . . . Professor of Philosophy
Frank Wadleigh Chandler, ph.d. . . . . Professor of English and Ropes Professor of Comparative Literature
Philip Ogden, ph.d. . . . . Professor of Romance Languages
Martin H. Fischer, m.d. . . . . Joseph Eichberg Professor of Physiology
Henry McElderry Knower, ph.d. . . . . Francis Brunning Professor of Anatomy
Harris Miller Benedict, ph.d. . . . . Professor of Botany
Selden Gale Lowrie, ph.d. . . . . Professor of Political Science
William Buchanan Wherry, a.b., m.d. . . . . Professor of Bacteriology and Hygiene
Alfred Lawrence Hall-Quest, a.m. . . . . Professor of Education
Harry Shipley Fry, ph.d. . . . . Professor of Chemistry
Harry Lewis Wieman, ph.d. . . . . Professor of Zoology
Edward F. Malone, a.b., m.d. . . . . Professor of Histology
Dennis E. Jackson, ph.d., m.d. . . . . Professor of Pharmacology
Alexander Lewis Jenkins, m.e. . . . Professor of Mechanical Engineering
Albert Prescott Mathews, ph.d. . . . . Professor of Biochemistry
Samuel James McIntosh Allen, ph.d., Professor of Experimental Physics
Claude M. Lotspeich, ph.d. . . Professor of Comparative Philology, Department of German
Robert Clyde Gowdy, ph.d. . . Professor of Physics, College of Engineering and Commerce
William Tunstall Semple, ph.d. . . . . Professor of Classics
Reginald Charles McGrane, ph.d. . . Professor of History, College of Engineering and Commerce
Richard Sisson Austin, m.d. . . . . Professor of Pathology
Earle Edward Eubank, ph.d. . . . . Professor of Social Science

Charles Napoleon Moore, ph.d. . Associate Professor of Mathematics
Clarence Dimick Stevens, a.m. . . . . Associate Professor of English
Henry G. Harman, ph.d. . . . . Associate Professor of Philosophy
Clarence Oran Gardner, ph.d. . Associate Professor of Political Science
Earl Frederick Farnau, ph.d., Associate Professor of Organic Chemistry
Ralph Edward Oesper, ph.d., Associate Professor of Analytical Chemistry
Shiro Tashiro, ph.d. . . . . Associate Professor of Biochemistry
Edmund M. Baehr, m.d. . . . . Associate Professor of Physiology
Clarence James Foreman, m.s., a.m., ph.d. . . . . Associate Professor of Economics
Orville Turner Wilson, ph.d. . . . . Associate Professor of Botany
Beverley Bond, Jr., ph.d. . . . . Associate Professor of History
Everett Irving Yowell, ph.d. . . . . Associate Professor of Astronomy
Carey P. McCord, m.d. . . . Associate Professor of Preventive Medicine
Henry Robinson Shipherd, ph.d. . . . . Associate Professor of English
Walter H. Bucher, ph.d. . . . . Associate Professor of Geology
George Andrews Hedger, ph.d. . . . . Associate Professor of History
Otto Charles von Schlichten, a.b. . . . Assistant Professor of Geology
Ernest Lynn Talbert, ph.d. . . . . Assistant Professor of Psychology
Hubertis Maurice Cummings, ph.d. . . . Assistant Professor of English
Edward C. Day, ph.d. . . . . Assistant Professor of Zoology
Merton Jerome Hubert, a.m., Assistant Professor of Romance Languages
Leonora Neuffer, ph.d. . . . . Assistant Professor of Chemistry
William A. Crowley, ph.d. . . . . Assistant Professor of Philosophy
Irving H. Brown, ph.d. . . . Assistant Professor of Romance Languages
Robert A. Kehoe, b.s., m.d. . . . . Assistant Professor of Physiology
Finis King Farr, a.m., d.d. . . . . Lecturer on Biblical Literature
Helen A. Stanley, a.m. . . . . Instructor in English
E. Lucy Braun, ph.d. . . . . Instructor in Botany
Floyd Eldon Beghtel, a.m. . . . . Instructor in Botany
Clarence A. Mills, ph.d. . . . . Instructor in Biochemistry
Willard Austin Kinne, a.b. . . . . Instructor in Romance Languages
Walter C. Phillips, ph.d. . . . . Instructor in English
Charles Murdoch Diserens, a.m. . . . . Instructor in Psychology
Harold Frederic Richards, ph.d. . . . . Instructor in Physics
Miriam B. Urban, a.m. . . . . Instructor in History
James F. Bogardus, a.b. . . . . Instructor in Economics

ADMISSION

Admission to the Graduate School is granted to holders of a Bachelor's degree conferred by the University of Cincinnati, and to those who present documentary evidence of having received such a degree from other institutions whose requirements are substantially equivalent. Admission to the Graduate School does not, however, signify candidacy for an advanced degree.

Properly qualified students, when duly registered, may, with the approval of the heads of the departments concerned, be admitted as auditors to courses of study. No work taken by auditors may under any circumstances be counted towards a degree.

FEES AND EXPENSES

All tuition and fees required from students must be paid in advance and as a condition of registration. Registration shall not be considered as completed until all such payments have been made, and a "late registration fee" shall be added to fees not paid on the days set apart for registration. If fees are not paid promptly, the deans are authorized to exclude students from attendance upon their classes.

Fees are subject to change as conditions necessitate: such changes take effect at once and apply to students already enrolled, unless otherwise specified.

Tuition and fees are not returnable except when withdrawal from the University is caused by sickness or causes entirely beyond the control of the student. Before application for refund will be considered, it is necessary that the student shall have submitted to the Registrar notice of his withdrawal at the date of such withdrawal. Students withdrawing under discipline forfeit all rights to a return of any portion of their fees.

The full amount of tuition and fees shall be returned to students who fail of admission to the University after same have been paid. In other cases refunds, when allowed, shall be in the following proportions:

During 1st and 2d weeks	80%
During 3d and 4th weeks	60%
During 5th and 6th weeks	40%
During 7th and 8th weeks	20%

After the eighth week no refund shall be allowed, but a credit memorandum may be issued for the total amount of the tuition or fees.

When the right of a student to register as a citizen of Cincinnati is in doubt, he must raise the question at once with the Registrar, and obtain the blank provided for the purpose. He shall then present his case in writing to the proper authorities, who will pass upon the matter. No person can gain residence in Cincinnati by enrolling as a student in the University.

If a student misrepresents himself as a citizen of Cincinnati at the time of registration, he shall be assessed the sum of $10 in addition to the tuition for that semester.

TUITION FEES

Tuition in the Graduate School is free to citizens of Cincinnati; students not citizens are charged at the rate of $7.50 a credit hour a semester.

Evening Academic Courses

Tuition in the Evening Academic Courses is free (a) to all citizens of Cincinnati; (b) to all teachers* in the public schools of the city, even though they are not citizens of Cincinnati. All other teachers who are not citizens are charged tuition at the rate of $5 a course a year. Non-residents other than teachers are charged tuition at the rate of $7.50 a credit hour a semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees are charged for courses in the laboratory sciences.

Extension Courses

A fee of $5 is charged for admission to *each* winter Extension Course; $10 for admission to *each* summer Extension Course. The laboratory fee for the course in botany is $10.

Courses for Teachers*

Teachers enrolled in the Graduate School pay the regular library fee of $5 a year. Tuition is free to all teachers in the public schools of Cincinnati. All other resident and non-resident teachers are charged tuition at the rate of $5 a course a year, payable in advance.

Combination Courses

Regular students enrolled in the Graduate School may elect in the College of Medicine courses for which they receive credit in the Graduate School without the payment of additional tuition to the College of Medicine. They must, however, pay the usual laboratory fees.

Special students who are taking courses in any college for professional purposes must pay the usual rate of tuition charged by the college in which credit is received.

LABORATORY FEES

All laboratory fees are payable strictly *in advance.*

A student will not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Botany, $10 a semester

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*Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

Chemistry, $15 a semester; $15 a course a summer term. ($10 a summer term for pre-medics.)

Geology, $5 a semester; $2.50 a semester for a course having but one laboratory period a week.

Metallurgy, $7.50 a semester; $7.50 a summer term. (Not required of students taking chemistry.)

Physics, $10 a semester; $5 a semester for a course having but one laboratory period a week; $15 a course a summer term

Psychology, $5 a semester

Zoology, $10 a semester for each course; $15 a course a summer term

Graduate students taking laboratory courses in the College of Medicine must pay for each course $15 a semester; breakage deposit $10. (This includes surgical anatomy, bacteriology, biochemistry, histology, pathology, pharmacology, physiology.)

GRADUATION FEES

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of $10 is charged a candidate for the degree of Master of Arts, and a fee of $20 is charged for the degree of Doctor of Philosophy.

MISCELLANEOUS FEES

Gymnasium.—A gymnasium fee of $5 a year ($2.50 a semester) is charged all students in the Graduate School who elect twelve hours of work a week.

The same fee is charged all other students in the University, members of the faculty, and alumni who desire to avail themselves of the privileges of the gymnasium and the swimming pool.

Contingent.—A contingent fee of $10 a year ($5 a semester) is charged all students in the Graduate School taking twelve hours of work a week who are not citizens of Cincinnati; a fee of $5 a year ($2.50 a semester) is charged all non-resident students taking more than six hours, but less than twelve.

Library.—All students in the Graduate School must pay a library fee of $5 a year at the opening of the session.

Student Activity.—All regular day students in all the colleges of the University must pay a student activity fee of $10 a year, full amount payable the first semester, with the following exception: for students in the professional colleges who have received an undergraduate degree the payment of the fee is optional.

Late Registration.—Students who apply for registration or submit schedules of study on days other than those designated are required to pay a fee of $1.

DEPOSITS

Chemistry Breakage.—An initial breakage deposit of $10 is required of every student who registers for a laboratory course in chemistry. Furthermore, a $5 breakage deposit is required for each additional semester or summer term of laboratory work in the same school year. If a student surrenders his laboratory outfit at the end of any semester or term, an initial breakage deposit of $10 will be required when the student again registers for a laboratory course in chemistry.

Five dollars of this initial breakage deposit must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining $5 a coupon-ticket is issued to the student, with which supplies and apparatus may be obtained at the chemistry storeroom. Should this coupon-ticket become exhausted, the student must purchase a new ticket ($5) before further supplies will be issued to him at the storeroom.

A breakage deposit of $5 is required of every student who registers for a metallurgy laboratory course. This deposit is not required of students who have paid the regular $10 breakage deposit for chemistry.

Locker.—A deposit of $1 must be made for the use of a locker; of this amount 25c is retained by the University for each year's use of the locker. A student who has already made a deposit of 50c must make an additional deposit of 50c. A locker may not be transferred from one student to another.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

The D. A. R. Fellowship in American History was established in 1900 by the Daughters of the American Revolution. It yields an income of $100 a year, in addition to exemption from the payment of tuition and laboratory fees.

The Hanna Fellowship in Physics was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is $500 a year, in addition to exemption from the payment of tuition and laboratory fees.

The Ten Baldwin Fellowships, each amounting to $500 in addition to exemption from the payment of tuition and laboratory fees, have been provided by the Francis Howard Baldwin bequest. For further information apply to the Dean of the Graduate School.

The Merrell Fellowship in Biochemistry, for the investigation of the nature of the natural cure of disease, is established by Mr. Charles G. Merrell, of the firm of the William S. Merrell Company. The stipend is fifteen hundred dollars.

THE ARMSTRONG-HUNTER MEMORIAL FUND, valued at $1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund has been used to found a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

RHODES SCHOLARSHIPS.—Men who have completed their Sophomore year at the University of Cincinnati are eligible to compete for the Cecil Rhodes Scholarships, tenable for three years at Oxford University, England, with a stipend of $1,500 each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curriculum activities. Further information may be obtained from any member of the Rhodes Scholarship Committee of Selection for Ohio; Chairman, President W. O. Thompson, Ohio State University, Columbus, Ohio; Professor B. E. Schmitt, Western Reserve University, Cleveland, Ohio; Cary R. Alburn, Esq., Attorney, Garfield Bank Building, Cleveland, Ohio; Secretary, Professor Leigh Alexander, Oberlin College, Oberlin, Ohio.

TEN GRADUATE SCHOLARSHIPS are offered by the University in several departments which exempt their holders from the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

For the fellowships, scholarships, and prizes of the various colleges, consult their several Announcements.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS AND MASTER OF SCIENCE

Completion of the requirements for the Master's degree requires at least one full year's residence in the Graduate School. Acceptance in candidacy for the degree of Master of Arts shall be determined by the Advisory Committee not later than the beginning of the last semester of work. When a student's college training has been defective, or when he is registered in a professional school, engaged in teaching, or otherwise occupied so that he cannot devote his entire time to his work, the Advisory Committee shall determine how much, if at all, the one-year period should be increased.

A student desiring to become a candidate for this degree shall designate, at the time of his admission to the Graduate School, the subjects and courses which he elects to study, and shall at the same time obtain approval of his election from his Adviser (the head of the department in which he elects his major work). The student must then satisfy the Dean of the Graduate School that the courses he has elected have been approved by the heads of the departments concerned.

The courses offered for the degree of Master of Arts shall represent not less than twenty-four credit hours of graduate instruction, of which at least twelve shall be in the major subject. In case the candidate elects a major in the same department in which he has completed a major in

fulfillment of the requirements for a Bachelor's degree, he may, under the direction of his Adviser, elect sufficient work in some allied department to complete the twelve credit hours. No credit is given for a course in which the student does not receive a record of "Satisfactory".

Each candidate for the Master's degree must present a thesis on a subject approved by his Adviser. The title of this thesis shall be submitted to the Dean at least six months before the degree is conferred. The thesis must be typewritten on regulation paper and be filed with the Dean before the close of the final semester of graduate study, together with a certificate of approval from the student's Adviser. The date for submitting the thesis is determined by the Adviser.

Candidates for the degree of Master of Arts are required to pass an oral examination before a committee of the faculty.

The requirements for the degree of Master of Science shall be the same as those for the degree of Master of Arts, subject to the following modifications: candidates must register in one of the departments of the natural sciences for their major work, and a thesis, embodying the results of a laboratory investigation in the major subject, must be presented to the faculty.

Students in professional schools, in addition to the above regulations, should note the following: in the major subject the courses presented for the degree of Master of Arts or for the degree of Master of Science, to the extent of at least twelve credit hours, may not also have been presented as part of the requirements, either as to time or subject credit, for a professional degree. Courses, elected as minor subjects, may be counted also for a professional degree, but such courses must be listed in the Announcement of the Graduate School.

Degrees will not be conferred *in absentia*, except by special permission from the President.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

For the Doctor's degree three years of graduate study will ordinarily be required. In cases where the student's college training has been defective or he cannot devote his whole time to the work, the period of study will be longer than three years. At least the last year of study must spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is satisfactory in character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These are known as a major and two minor subjects, not more than two of which shall be selected in one department. The candidate shall

satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, constitute an advisory committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree he must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction embodied in a major and two minor subjects, thirty units of which must be given to the major subject, and must have passed such written examination on his major and minor subjects as the Advisory Committee may indicate and an oral examination before the faculty. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment. No credit is given for a course in which the student does not receive a record of "Satisfactory".

The candidate is furthermore required to present, in such form as the Advisory Committee may determine, a thesis which gives evidence of high attainment and power of independent research. The thesis must be accepted before the candidate is allowed to take his final examinations.

All theses offered for the Doctor's degree must be filed with the Dean not later than six weeks before the close of the final semester of graduate study. Moreover, each student is required to deposit in the University library one hundred printed copies of his thesis. If the thesis is published in a journal approved by the candidate's Advisory Committee, ten printed copies may be deposited in the library. The candidate may receive his diploma before the thesis is printed, provided a typewritten copy is deposited with the Librarian and the sum of $50 with the Registrar of the University. This sum will be returned upon the presentation to the library of the required number of printed copies of the thesis.

Degrees will not be conferred *in absentia*, except by special permission from the President.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained by work done in residence at the University of Cincinnati.

INSTRUCTION

The work of each candidate for a degree shall be under the direction of an advisory committee, composed of the Dean and of the heads of the departments in which the work is taken.

The unit of instruction is one period a week for one semester.

Graduate students will receive no credit towards a degree of Master of Arts, Master of Science, or Doctor of Philosophy for courses which are not of an advanced character. All courses for which credit is expected must be listed in the announcement of the Graduate School. Supplementary work must be specified in courses which are intended primarily for advanced undergraduate students; otherwise, but half credit will be allowed.

While the nature of the students' work may vary in the subjects selected, it is understood to require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as *in absentia*. No credit will be given towards a graduate degree for work done prior to the conferring of a Bachelor's degree or its equivalent.

SPECIAL ARRANGEMENTS

With the approval of the Dean of the Graduate School and their Advisers, candidates may offer certain courses taken in the Lane Theological Seminary and in the collegiate department of the Hebrew Union College in partial fulfillment of the requirements for the degree of Master of Arts. Not more than twelve units may be counted in fulfillment of the requirements of minor subjects for the Master's degree. For further information regarding courses offered under this agreement, see Departments of History and Philosophy.

COURSES OF INSTRUCTION

Supplementary work is in all cases required in courses which are intended primarily for advanced undergraduate students; otherwise, but half credit is allowed.

ANATOMY

The number of graduate students admitted to these courses will, at present, be limited. Evidences of necessary preliminary preparatiou and fitness must be submitted to the professors in charge of courses.

102. Histology and Organology.—(a) *First semester*, M., W., Th. afternoons; (b) *Second semester*, W. and F. afternoons for the first 12 periods. Six credit hours. Dr. Malone
A macroscopic and microscopic analysis of the structure of the body. Course 2 of the medical schedule modified through collateral reading and experiments to adapt it to the special needs of candidates for graduate degrees. It is desirable that this course be taken with Course 104. If this should not be done, students will still be expected to secure a fair grasp of the gross features of parts, as well as of the finer microscopic details.

103. Neurological Anatomy.—(b) The last 20 periods of the *second semester*, W. and F. afternoons. Two credit hours. Dr. Malone
Gross and microscopic structure of the nervous system, involving a study of the mechanisms which underlie its functions. Course 3 of medical schedule modified by extra work for graduate students.

104. Human Anatomy.—(a) *First semester*, Tu., Th., F., and S. mornings. Six credit hours. (b) *Second semester*, Tu., Th., F., S. mornings, and M. afternoon. Seven credit hours. Dr. Knower
Study of the human body in the dissecting room. Course 4 of the medical schedule modified through conferences, collateral reading, drawing, etc., to adapt it to the special needs of candidates for graduate degrees. Graduate students must have had a course in elementary vertebrate embryology.

The courses outlined may be taken as minors, graduate students who wish to major in any subject must first take courses Nos. 1, 2, 3, 4; or 101-104, as prerequisites.

105. Research or Special Studies. Dr. Knower
Arrangements for work in aspects of human anatomy, embryology, histology, or comparative and experimental lines not covered in the above courses, may be made through the head of the department.

108. SEMINAR.—One credit hour
A weekly meeting for staff, graduates, etc., to review literature and discuss problems of common interest in gross and microscopic anatomy.

ASTRONOMY

For Graduates and Undergraduates

An extra amount of computing will be required of graduate students in the following courses:

103. SPHERICAL AND PRACTICAL ASTRONOMY.—Once a week throughout the year. Mr. Porter, Mr. Yowell

104. CELESTIAL MECHANICS.—Once a week throughout the year. Mr. Porter, Mr. Yowell

BACTERIOLOGY AND HYGIENE

The work is done on two floors of the pathologic institute. One of these is devoted to a student's laboratory and special research rooms, and a second (top floor) to special operating rooms and quarters for animals. As the central bacteriological laboratory of the hospital, the department has access for teaching purposes to everything dealing with the problem of communicable diseases which comes up in the hospital. As far as possible the medical aspects of bacteriology and animal parasitology are taught by making the student study material obtained from the wards and post-mortem rooms of the hospital.

101 and 102. GENERAL BACTERIOLOGY AND THE ANIMAL PARASITES OF MAN.—*First semester*, 174 hours, 5 credit hours. Dr. Wherry, Mr. McKhann

The production of disease and the relation of bacteriology to personal and public hygiene. The more important protozoa, helminths, and insects concerned in the cause and transmission of disease are studied.

103. ADVANCED BACTERIOLOGY. Dr. Wherry
Open to qualified students who wish to work on special aspects of bacteriology.

104. RESEARCH WORK. Dr. Wherry
Open to specially qualified students.

105. LECTURES ON HYGIENE.—*Second semester*, 16 hours, 1 credit hour. Dr. McCord

The personal and the municipal hygiene of transmissible diseases.

106. Serum Diagnosis and Therapeutics.—Eight hours, ½ credit hour. Dr. Berghausen
A lecture and conference course with practical demonstrations in immunology and immuno-diagnostics, including vaccines, sera, etc.

107. Graduate Work in Bacteriology and Parasitology.
Drs. Wherry, McCord
Open to any qualified person working for a graduate degree, or to those wishing to perfect themselves in some special line of work.

108. Research.—Credit according to number of hours elected.
Dr. Berghausen

109. Seminar.—Saturday mornings. One credit hour.
Open to graduate and medical students. Special topics are assigned and the current literature reviewed.

BIBLICAL LITERATURE

107a. First Principles of Biblical Literature.—*First semester*, Tu., Th., 11:30-12:30. Mr. Farr
For graduate credit a thesis on an assigned topic will be required.

114b. Social Teaching of Jesus.—*Second semester*, Tu., Th., 11:30-12:30.
Mr. Farr
For graduate credit a thesis on an assigned topic will be required.

BIOCHEMISTRY

For Graduates and Undergraduates

101a. Chemistry of the Cell, Digeston, and Urine.—Three credit hours. M., W., 8:30-9:30; F., 11:30-12:30. Mr. Mathews
Lecture and recitation.

102a. Chemistry of the Cell, Digestion, and Urine.—Three credit hours. M., W., 9:30-12:30; F., 1:15-4:15.
Mr. Mathews, Mr. Tashiro
Practical work.

Primarily for Graduates

104b. Internal Secretions.—One credit hour. Tu., 11:30-12:30.
Mr. Mathews
For medical and graduate students.

105b. Advanced Quantitative Methods of Analysis of Blood and Urine.—Six or 12 hours a week. Two, three, or six credit hours.
Mr. Tashiro
Prerequisite: Courses 1, 2, or equivalent

106. Physico-Chemical Methods of Biochemistry.—Three or six credit hours. Mr. Tashiro
Conferences and laboratory 6 or 12 hours a week.
Alternates with course 109. Omitted in 1922-1923

107. Research. Mr. Mathews, Mr. Tashiro, Mr. Mills

108. Seminar.—Fifteen hours. One credit hour. Department staff
Open to graduate and medical students.

109. Microchemical Methods.—Three or six credit hours. Mr. Tashiro
For studying cell respiration. Alternates with course 106.

BOTANY

To pursue advanced courses in botany the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

Requirements for Degrees

To enter upon work for the degree of Master of Arts in botany, students must have completed Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18, or their equivalents. (See Announcement of the College of Liberal Arts.) Courses "For Undergraduates and Graduates" may be counted as graduate subjects towards the degree of Master of Arts by students who have elected majors in other departments. When botany is chosen as a minor for the degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in botany. The requirements for a higher degree, when botany is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 13, 14).

For Graduates and Undergraduates

A thesis is required of all graduates who enroll in courses open to undergraduates.

105. Systematic Botany.—One lecture with one laboratory or field period of work a week on the local plants. Miss Braun
Prerequisite: Courses 1 and 2

106a. Plant Pathology.—*First Semester*, Lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson
The causes, symptoms, and prevention of plant diseases.

106b. Bacteriology.—*Second Semester*, lec., Tu., 8:30; lab., Tu., Th., 8:30-11:30. Mr. Wilson
Study of the physiology and morphology of bacteria.

110. Plant Breeding.—M., W., 11:30-12:30. Mr. Benedict
A course in heredity and its application to the development of improved varieties of cultivated plants.
Prerequisite: One year of either botany or zoology

115. Advanced Ecology.—One lecture a week. Miss Braun

[116a. Plant Histology]. *First Semester*, lec., M., 1:00-2:00; lab., M., W., 1:00-4:00.
Prerequisite: Two years' work in botany Mr. Beghtel
Omitted in 1922-1923

[116b. Plant Cytology.] *Second Semester*, lec., M., 1:00-2:00; lab., M., W., 1:00-4:00. Mr. Beghtel
Prerequisite: Course 116a
Omitted in 1922-1923

117. Special Problems.—One, two, or three credits. Instructor according to problem chosen.
Prerequisite: Three years' work in botany

118. Plant Physiology.—Two lectures a week. Mr. Benedict
Open to Seniors and graduate students in botany.

Primarily for Graduates

120. Current Problems in Botany.—One or two credit hours.
Reviews of recent researches. Mr. Benedict
Prerequisite: Courses 1, 2, 3, 4, 5, 6a, 6b, 16a, 16b, 18

121. Research.—Credit according to number of hours elected.
Mr. Benedict, Mr. Wilson, Miss Braun

CHEMISTRY

Special Requirements for Higher Degrees

The Degree of Doctor of Philosophy

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject in the Graduate School must have completed the following courses or their equivalents (see Announcement of the College of Liberal Arts): 1a, 2a, 3b, 4b, 5a, (or 5c), 6a (or 6c), 7a (or 7c), 7b, 8b (or 8c), 9b (or 9c), 12a, 18a, 19a (or 19c), 32b. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the elected branch. The completion of the prerequisite and the elected courses, however, does not satisfy the requirements to be fulfilled by the candidate

for a higher degree: he must show a maturity acquired by personal intimacy with the literature and methods of chemistry.

Each candidate for an advanced degree must take an active part in chemistry seminar during his graduate residence.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the head of the department in which the major work falls. The usual minimum prerequisite requirements are Courses 1, 2a, 3b, 4b, 5a, 6a, 7a. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) are required; if one of the biological sciences has been made the major subject, Courses 8b and 9b are taken.

The Degree of Master of Arts

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

For Graduates and Undergraduates

Graduate students who register for Courses 110a—124b are required to complete additional assignments of a more advanced character than those required of undergraduates.

110a. Advanced Inorganic Chemistry.—*First semester,* Tu., Th., 8:30-9:30. Mr. Fry

111. Inorganic Preparations.—*First or second semester.* Mr. Oesper

112a. Physical Chemistry.—*First semester,* M., W., F., 10:30-11:30. Mr. Feusse

113a. Physical Chemistry, Laboratory.—*First semester,* F., 1:00-4:00; S., 8:30-11:30. Mr. Feusse

132b. Physical Chemistry.—*Second semester,* M., W., F., 10:30-11:30. Mr. Feusse

133b. Physical Chemistry, Laboratory.—*Second semester,* F., 1:00-4:00; S., 8:30-11:30. Mr. Feusse

134a. Chemistry of Colloids.—*First semester,* three lectures a week. Mr. Oesper

128. Ultimate Organic Analysis. Mr. Oesper

120b. Advanced Organic Chemistry.—*Second semester,* M., W., F., 9:30-10:30. Miss Neuffer

121. Advanced Organic Chemistry, Laboratory.—Credit according to number of hours elected. Miss Neuffer

124b. History of Chemistry.—*Second semester,* three exercises a week. Mr. Fry

127. Advanced Quantitative Analysis.—Credit according to number of hours elected. Mr. Oesper

Primarily for Graduates

130. Research. Mr. Fry, Mr. Farnau, Mr. Oesper
Problems for investigation may be chosen in the following fields: organic chemistry (130A), inorganic chemistry (130B), physical chemistry (130C), analytical chemistry (130D).
During the summer of 1922 students engaged in research may enroll in the Graduate School.

140. Seminar.—M., 4:00. Mr. Fry

CIVIL ENGINEERING

124. Advanced Research Work

CLASSICS

Greek

106. Subject to be chosen by conference. Three hours. Mr. Robinson

Latin

110. Latin Seminar.—Three hours. Mr. Semple
The seminar considers Caesar, Cicero, and Vergil in this order. Author used in 1922-1923 is Vergil.

112. Conference Course.—Three hours. Mr. Semple

Latin and Romance Palaeography

101. Introduction to Latin Palaeography and Text Criticism.—Two hours. Mr. Robinson

ECONOMICS

(The Sinton Professorship)

For Graduates and Undergraduates

In the following courses additional reading and reports will be required of graduate students.

111. Elements of Economics.—Tu., 3:00-5:00. Mr.———

113. Development of Economic Institutions.—M., 2:00-4:00. Mr. ———

114. Economic Policies in Their Relation to Distribution.—Th., 3:00-5:00. Mr. ———

115a. Transportation.—*First semester*, M., W., F., 10:30-11:30. Mr. Foreman

118b. Foreign Trade Policies.—*Second semester*, M., W., F., 10:30-11:30. Mr. Foreman

119a. Money and Banking.—*First semester*, M., W., F., 9:30-10:30. Mr. Foreman

120b. Monopolies and Trusts.—*Second semester*, M., W., F., 9:30-10:30. Mr. Foreman

117a. Socialism.—*First semester*, Tu., Th., 2:00-3:00 Mr. ———

116b. Labor.—*Second semester*, Tu., Th., 2:00-3:00. Mr. Bogardus

131. Statistics.—M., 5:00-7:00. Mr. Foreman

Primarily for Graduates

112. History of Economic Theory.—Twice weekly. Mr. Foreman

121. Seminary.—Twice weekly. Mr. Foreman

123. Research.—Credit according to number of hours elected. Mr. Foreman

EDUCATION

Those candidates for graduate degrees who intend to become instructors in education, and those who wish to qualify for supervisory or administrative positions in schools, may elect education as the major subject; other graduate students may elect education as a minor, subject to the approval of the head of the department in which the candidate's major subject is chosen.

Subject to the approval of the instructor in each case, graduate courses in education are open also to teachers who are prepared to pursue such courses in a satisfactory manner, even though such teachers be not candidates for a graduate degree.

A candidate for a graduate degree who elects education as a major subject must have had approved undergraduate courses in education and psychology, and will be required to take Education 101. Beyond these requirements the candidate's elections are subject to the approval of the instructors in education.

101. Studies in History and Philosophy of Education.—Th., 4:00-5:30. Mr. Burris

From time to time this course will be devoted to a critical study of modern educational theories contained in the writings of

educators whose influences are felt in current educational opinion and practice.
A thesis will be required.
1922-23. Herbart and Spencer
1923-24. Froebel and Dewey
1924-25. Locke and Rousseau

103a. SECONDARY EDUCATION.—*First semester*, Tu., 4:00-6:00. Mr. Hall-Quest
Discussion of typical problems in secondary education.

103b. EDUCATIONAL VALUES OF VARIOUS STUDIES IN SECONDARY EDUCATION.—*Second semester*, Tu., 4:00-6:00. Mr. Hall-Quest

104. THE PSYCHOLOGY OF THE HIGH SCHOOL PUPIL.—S., 8:30-10:30. Mr. Hall-Quest
The course includes a study of recent literature on adolescence; of individual differences and recent social movements in the high school.

107. SCHOOL SUPERVISION.—Tu., 4:00-5:30. Mr. Burris
Intended especially for those preparing for principalships.

[109a. THE JUNIOR HIGH SCHOOL MOVEMENT] *First semester*, W., 4:00-6:00. Mr. Hall-Quest
Omitted in 1922-1923

[109b. THE PSYCHOLOGY AND SUPERVISION OF STUDY.] *Second semester*, W., 4:00-6:00. Mr. Hall-Quest
Omitted in 1922-1923

110. EXPERIMENTAL EDUCATION.—W., 4:00-6:00. Mr. ———

[112. MEASUREMENT OF RESULTS IN EDUCATION.] S., 10:30-12:00. Mr. Burris
Intended for those persons who wish to acquaint themselves with modern methods of giving tests and measuring the results of teaching.
Omitted in 1922-1923

[114. EDUCATIONAL ECONOMY.] W., 4:00-6:00. Mr. ———
Current education means and procedures evaluated in view of fundamental aims and the principles of mental hygiene. The courses will include original investigation of problems of management, social environment, types of character, school auxiliaries, etc., and a critical review of the so-called progressive movements in education.
Omitted in 1922-1923

ENGLISH

COMPARATIVE LITERATURE

(The Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates and Upper-Classmen

Additional reading and reports are required of graduates taking courses open to undergraduates.

106. VICTORIAN POETRY.—M., W., F., 8:30-9:30 Mr. Shipherd

107. OLD ENGLISH.—Tu., Th., 8:30-9:30. Mr. Lotspeich

110. CHAUCER AND HIS PERIOD.—M., Tu., Th., 11:30-12:30. Mr. Stevens

112. LITERARY COMPOSITION.—Tu., Th., 10:30-11:30. Mr. Shipherd
Membership in Course 112 is strictly limited. Those who wish to register should first submit manuscripts to the instructor for approval.

114. ENGLISH DRAMA TO 1642.—S., 9:30-11:30. Miss Stanley

GERMAN 115. PHONETICS AND LINGUISTICS.—M., W., 1:00-2:00. Mr. Lotspeich

116. ROMANTIC POETRY AND PROSE (1798-1832).—Tu., Th., 9:30-10:30. (Omitting the novel) Mr. Phillips

122. FOREIGN BACKGROUNDS OF ENGLISH LITERATURE.—Tu., Th., 2:00-3:00. Mr. Chandler

124. RECENT EUROPEAN DRAMA.—Tu., Th., 1:00-2:00. Mr. Chandler

143. RECENT EUROPEAN FICTION.—Tu., Th., 9:30-10:30. Mr. Stevens

For Graduates Only

108. TRAGEDIES OF SHAKESPEARE.—W., 4:00-6:00. Mr. Cummings

120. THEORIES OF LITERATURE.—Seminary, M., 4:00-6:00. Mr. Chandler

GEOLOGY AND GEOGRAPHY

For Graduates and Undergraduates

105b. FIELD GEOLOGY AND SURVEY METHODS.—*Second semester*, hours and amount of credit to be arranged by agreement with each student. Mr. Bucher

107. Mineralogy.—Tu., Th., S., 9:30-10:30; F., 1:40-5:00. Mr. von Schlichten
Lectures and laboratory. Additional determinations required for graduate credit.

108. Introductory Paleontology.— Mr. Bucher
Additional reading required for graduate credit.

112. Petrology.—Hours and amount of credit to be arranged. Mr. von Schlichten

113. Special Work in Geology.—Credit according to number of hours elected.

116. Advanced Physiography of the United States.—Lec., W., 4:00-6:00; S., 10:30-11:30. Mr. Fenneman
Additional papers required for graduate credit.

109. Historical Geology.—Lec., Tu., Th., 8:30-9:30. Mr. Bucher
Additional reading required for graduate credit.

111. Structural Geology.—Credit according to work elected. Mr. Bucher

122. Field Course.—Six credits. Mr. von Schlichten
Six weeks during summer, chiefly in camp.

GERMAN

For Graduates and Undergraduates

Additional reading is required of all graduate students who enter courses open to undergraduates.

105. History of German Literature to the Nineteenth Century.—M., W., F., 10:30-11:30. Mr. Poll
Special study of the classic periods of the twelfth and eighteenth centuries.

[110. German Composition (advanced course).] S., 9:30-11:30.
Omitted in 1922-1923 Mr. Poll

[130. Glimpses of German Life and Culture.] S., 9:30-11:30.
Omitted in 1922-1923 Mr. Poll

Primarily for Graduates

[112. Faust.] W., 4:00-6:00. Mr. Poll
Interpretation of both parts and study of the legend. Collateral reading and written reports.
Prerequisite: Course 105
Omitted in 1922-1923

111. German Drama of the Twentieth Century.—M., 4:00-6:00. Mr. Poll
Prerequisite: Course 105

[116. German Novel of the Nineteenth and Twentieth Centuries.] M., 4:00-6:00. Mr. Poll
Prerequisite: Course 105
Omitted in 1922-1923

[117. The Origin and Development of the German Drama to the End of the Nineteenth Century.] M., 4:00-6:00. Mr. Poll
Prerequisite: Course 105
Omitted in 1922-1923

107. Middle High German.—W., 4:00-6:00 Mr. Poll

108b. Old High German.—*Second semester*, Tu., 4:00-6:00 Mr. Lotspeich
Special attention to the development into modern German.

113a. Gothic and Germanic Philology.—*First semester*, Tu., 4:00-6:00. Mr. Lotspeich

[126. Old Norse.] M. or F., 4:00-6:00. Mr. Lotspeich
Omitted in 1922-1923.

[109. German Seminary.] Th., 4:00-6:00. Mr. Poll
Special topics in the drama.

Comparative Philology

115. Phonetics and Linguistics.—M., W., 1:00-2:00. Mr. Lotspeich
Open to Seniors and graduates.

131. Sanskrit (elementary).—Two hours. Mr. Lotspeich

[132. Sanskrit (advanced).] Two hours. Mr. Lotspeich
Omitted in 1922-1923

HISTORY

For Graduates and Undergraduates

Graduate students enrolled in mixed courses are expected to do extra work in order to receive full credit for the course.

[122. History of American Diplomacy.] M., W., 11:30-12:30
Omitted in 1922-1923 Mr. McGrane

123. Recent American History.—M., W., 11:30-12:30. Mr. Bond

124. The French Revolution and the Period of Napoleon.—M., W., F., 10:30-11:30. Miss Urban

[125. Europe Since 1815.] Tu., Th., S., 9:30-10:30. Miss Urban
Omitted in 1922-1923

126. England and Greater Britain since 1815.—Tu., Th., 11:30-12:30. Mr. Hedger

[127. Constitutional History of England.] Tu., Th., 11:30-12:30. Mr. Hedger
Omitted in 1922-1923

[128a. Modern Imperialism.] *First semester*, Tu., Th., 11:30-12:30. Mr. Hedger

[128b. International Relations, 1870-1914, and the World War.] *Second semester*, Tu., Th., 11:30-12:30. Mr. Hedger
128a and 128b are omitted in 1922-1923

[129. Evolution of the German Empire.] Tu., Th., 9:30-10:30. Miss Urban
Omitted in 1922-1923

Primarily for Graduates

130. Seminary in American History.—S., 10:00-12:00 Mr. Bond
Subject for 1922-1923, Beginnings of the West to 1783.

131. Seminary in European History.—W., 4:00-6:00 Mr. Hedger
Subject for 1922-1923, Evolution of British Liberalism.

132. Expansion and Conflict, United States, 1824-1860.—Th., 4:00-6:00. Mr. McGrane

[133. American Colonial History.] Th., 4:00-6:00. Mr. Bond
Omitted in 1922-1923

Note.—The following courses in the Hebrew Union College and in the Lane Theological Seminary may be accepted, for not more than twelve units, as minors towards a Master's degree. For details, as to registration and credit for each course, consult either the head of the Department of History, or the professor in charge of the course under consideration.

Hebrew Union College

140. Jewish History

Lane Theological Seminary

151. Ancient and Medieval Church History

152. Reformation Church History

153. Modern Church History

154. Elective courses in History, as may, from year to year, be approved by the Department of History of the University

155. Old Testament History

MATHEMATICS

For Graduates and Undergraduates

[108. Advanced Integral Calculus.] M., W., F., 11:30-12:30. Mr. Hancock
Additional examples required of graduate students.
Omitted in 1922-1923

109. Differential Equations.—M., W., F., 11:30-12:30. Mr. Hancock

[115. Theory of Equations, Including Determinants.] Mr. Hancock
Omitted in 1922-1923

Primarily for Graduates

139. Theory of Numbers, Part V.—Tu., Th., 4:00-6:00. Mr. Hancock
Selected chapters in the theory of algebraic numbers.

128. Theory of Functions of a Real Variable.—M., W., 4:00-5:30. Mr. Moore

126. History and Teaching of Mathematics.—W., 4:00-5:00; F., 4:00-6:00. Mr. ———

160. Course in Reading and Research.—Credit according to number of hours elected. Mr. Moore

MATHEMATICS (APPLIED)

100. Vectorial Mechanics.—Two credit hours a semester. Mr. Brand
The fundamental equations of dynamics are developed in vector notation. These are then applied to the classic problems in the dynamics of a particle and of rigid bodies.

101a. The Mathematical Theory of Elasticity.—*First semester.* Two credit hours. Mr. Brand

102b. Hydrodynamics.—*Second semester.* Two credit hours. Mr. Brand
The fundamental theorems of hydrodynamics are developed in vector notation. Especial attention is given to the dynamics of aerial flight.

MECHANICAL ENGINEERING

132. Advanced Experimental Engineering

PALAEOGRAPHY

Owing to the death of Professor Burnam no announcement can be made for the year 1922-1923 of courses in palaeography, other than that work will be offered in Latin palaeography by Professor Robinson of the Department of Classics. See "Classics," page 23.

PATHOLOGY

(The Mary M. Emery Chair of Pathology)

The work in pathology is carried on in the pathologic institute, about half of the space in the building being used by the department of pathology. Since the professor of pathology is pathologist to the hospital, its resources are available for teaching purposes.

The nature of the subject of pathology makes the satisfactory completion of the required elementary courses in anatomy, histology, embryology, and physiology prerequisite for admission to the courses in pathology.

101. POSTMORTEM TECHNIQUE.— Dr. Austin

103a. GENERAL AND SPECIAL PATHOLOGY.—168 hours. *First semester*, Tu., Th., F., 8:30-12:30. Dr. Austin

104. SPECIAL TOPICS IN PATHOLOGY.— Drs. Cofield and Shinkle

105. CLINICAL AND PATHOLOGICAL CONFERENCES.—S., 12:00-1:00. Dr. Austin

See Department of Medicine, Announcement of College of Medicine.

106. ADVANCED WORK AND RESEARCH.—For qualified persons who desire to do special work under the direction of the head of the department.

PHILOSOPHY

For Graduates

While these courses include the undergraduate courses coming at the same hours, they are more intensive than the latter and involve in part another subject-matter.

102a. LOGIC.—*First semester*, Tu., Th., S., 10:30-11:30. Mr. Tawney

102b. THEORY OF SCIENTIFIC METHOD.—*Second semester*, Tu., Th., S., 10:30-11:30. Mr. Tawney

103a. HISTORY OF PHILOSOPHY FROM THE ITALIAN RENAISSANCE TO THE TIME OF KANT.—*First semester*, M., W., F., 8:30-9:30. Mr. Tawney

103b. History of Modern Philosophy from the Time of Kant.—*Second semester*, M., W., F., 8:30-9:30. Mr. Tawney

[104a. History of Philosophy to the Beginning of the Christian Era.] *First semester*, M., W., F., 8:30-9:30. Mr. Tawney
Omitted in 1922-1923

[104b. History of the Philosophy of the Middle Ages.] *Second semester*, M., W., F., 8:30-9:30. Mr. Tawney
Omitted in 1922-1923

105a. Ethics.—*First semester.*

Sec. I:	M., W., F.,	8:30- 9:30	Mr. Crowley
Sec. II:	M., W., F.,	10:30-11:30	Mr. Tawney
Sec. III:	M., W., F.,	1:00- 2:00	Mr. Crowley

105b. Ethical Interpretations.—*Second semester.*

Sec. I:	M., W., F.,	8:30- 9:30	Mr. Crowley
Sec. II:	M., W., F.,	10:30-11:30	Mr. Tawney
Sec. III:	M., W., F.,	1:00- 2:00	Mr. Crowley

122. Ethics.—M., 7:30-9:30. Mr. Crowley

108a. Aesthetics.—*First semester*, Tu., Th., 11:30-12:30. Mr. Hartman
The theory of art and the beautiful.

108b. Aesthetics.—*Second semester*, Tu., Th., 11:30-12:30. Mr. Hartman
The theory of art and the beautiful.

109. Types of Epistemology and Metaphysics.—Tu., 7:30-9:30. Mr. Tawney

110. History of Science.—M., W., F., 9:30-10:30. Mr. Crowley

123. British Empiricism.—Tu., Th., 8:30-9:30. Mr. Hartman

127. Recent Tendencies in Philosophy.—W., 7:30-9:30. Mr. Hartman

133. Courses in the Hebrew Union College.—
Courses in Biblical Literature, Rabbinical Literature, and Jewish Philosophical Literature, to the extent of not more than twelve hours, in fulfillment of the requirements of minor subjects for the degree of Master of Arts.

134. Courses in the Lane Theological Seminary.—
Courses in Old Testament Thought, The Psalms, and The Prophets to the extent of not more than twelve hours, in fulfillment of the requirements of minor subjects for the degree of Master of Arts.

PHYSICS

For Graduates and Undergraduates

32a. Philosophy of Science.—*First semester*, Tu., Th., 10:30-11:30. Mr. More

32b. Philosophy of Science.—*Second semester*, Tu., Th., 10:30-11:30. Mr. More

03a. Theoretical Mechanics.—Tu., Th., S., 11:30-12:30. Mr. Richards

18b. Theory of Electricity and Magnetism.—Three times weekly. Mr. Richards

119a. Theory of Heat.] Three times weekly. Mr. Richards
Omitted in 1922-1923

115b. Theory of Light.] Three times weekly. Mr. Richards
Omitted in 1922-1923

108. Advanced Experimental Physics.—Credit according to number of hours elected. Mr. Allen, Mr. More, Mr. Gowdy

110. Seminary.—Tu., 4:00-6:00. Mr. More

133a. Discharge of Electricity through Gases.] Twice weekly.
Omitted in 1922-1923 Mr. Allen

133b. Discharge of Electricity through Gases.] Twice weekly.
Omitted in 1922-1923 Mr. Allen

125a. Theoretical Mechanics.—Twice weekly. Mr. Richards

134b. Lectures on Sound.—Twice weekly. Mr. Gowdy

For Graduates Only

107. Lectures on Theoretical Physics.—Twice weekly. Mr. More

109. Research.—Daily. Mr. More, Mr. Allen, Mr. Gowdy
Those electing this course are supplied with all the apparatus needed, and with the assistance of the mechanician.

PHYSIOLOGY

(The Joseph Eichberg Professorship)

The first five of the following courses representing advanced work in physiology required of students of medicine may be elected by graduate workers to satisfy the requirements for their minors. Such choice may, however, be made only after consultation with the head of the department and in connection with extra reading and study.

101. MEDICAL PHYSIOLOGY.—Freshman year, *second semester*, 75 hours, 4½ credit hours. Dr. Fischer
The general physiology of the cell, the blood, circulation, respiration, muscle-nerve, and alimentation. A lecture and conference course.

102. MEDICAL PHYSIOLOGY.—Freshman year, *second semester*, 100 hours, 2 credit hours. Drs. Fischer, Kehoe, McIntyre, Eckstein
A laboratory course paralleling Course 1 and illustrating the classical experiments upon which our present knowledge of the subject rests.

103. MEDICAL PHYSIOLOGY.—Sophomore year, *first semester*, 75 hours, 4½ credit hours. Dr. Fischer
The physiology of metabolism, animal heat, absorption, secretion, and the ductless glands. A lecture and conference course.

104. MEDICAL PHYSIOLOGY.—Sophomore year, *first semester*, 45 hours, 3 credit hours. Dr. McIntyre
The physiology of the spinal cord, the brain, and the special senses. A lecture and conference course.

105. MEDICAL PHYSIOLOGY.—Sophomore year, *first semester*, 80 hours, 4 credit hours. Drs. Fischer, Kehoe, McIntyre, Eckstein
A laboratory course in physiology, paralleling Courses 3 and 4.

106. RESEARCH.— Dr. Fischer
Open to any qualified person after consultation with the head of the department.

POLITICAL SCIENCE

For Graduates and Undergraduates

In courses open to both graduates and undergraduates, graduate students are expected to do a greater amount of reading than undergraduates, and such additional work as the instructor prescribes.

102. INTERNATIONAL LAW.—M., W., 9:30-10:30. Mr. Lowrie

103a. DEVELOPMENT OF POLITICAL THOUGHT.—*First semester*, Tu., Th., 1:00-2:00. Mr. Gardner

109. EUROPEAN GOVERNMENTS.—Tu., Th., 9:30-10:30. Mr. Gardner

110b. PROBLEMS OF NATIONAL ADMINISTRATION.—*Second semester*, Tu., Th., 10:30-11:30. Mr. Gardner

111b. MUNICIPAL ADMINISTRATION.—*Second semester*, M., W., F., 8:30-9:30. Mr. Lowrie

112. WORLD POLITICS.—F., 9:30-10:30. Mr. Lowrie, Mr. Gardner

113b. Recent Political Theory.—*Second semester*, Tu., Th., 1:00-2:00. Mr. Gardner

121a. State and Local Administration.—*First semester*, Tu., Th., 10:30-11:30. Mr. Lowrie

125. Seminar.—M., 4:00-6:00. Mr. Lowrie

Courses Regularly Given, but Omitted During 1922-1923

104. Political Parties

106. Public Finance and Taxation

116. English and American Constitutional History

117a. Advanced American Government

122. Problems in Municipal Finance

PSYCHOLOGY

For Graduates and Undergraduates

A theme and additional reading are required of all graduate students who enter courses open to undergraduates.

102a. Experimental Psychology.—*First semester*, M., W., F., 2:00-4:30. Mr. Diserens

102b. Experimental Psychology.—*Second semester*, M., W., F., 2:00-4:30. Mr. Diserens

109. Mental and Physical Tests.—Tu., 3:00-5:00. Mr. Breese, Mr. Diserens

120a. Psychology of Primitive Peoples.—*First semester*, Th., 4:00-6:00. Mr. Talbert

120b. Psychology of Primitive Peoples.—*Second semester*, Th., 4:00-6:00. Mr. Talbert

132a. Introductory Social Psychology.—*First semester*, Tu., Th., 10:30-11:30. Mr. Talbert
Prerequisite: Introductory Psychology and Social Science 1

132b. Problems of Social Psychology.—*Second semester*, Tu., Th., 10:30-11:30. Mr. Talbert
Prerequisite: Introductory Psychology and Social Science 1

134a. Applied Psychology.—*First semester*, Tu., Th., 1:00-2:00. Mr. Diserens
Forms of behavior and factors in human efficiency.

134b. Applications of Psychology in Special Fields.—*Second semester*, Tu., Th., 1:00-2:00. Mr. Diserens

Primarily for Graduates

103. Research. Mr. Breese

104. Seminar.—Th., 3:00-5:00. Mr. Breese
A critical study of the most important problems in psychology.

ROMANCE LANGUAGES

French

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

104. French Drama in the Seventeenth Century.—Tu., Th., 9:30-10:30. Mr. Ogden

105. French Drama in the Nineteenth Century.—M., W., 11:30-12:30. Mr. Kinne

124. Nineteenth Century Poets.—Tu., 4:00-6:00. Mr. Ogden

125. Development of the French Novel.—Tu., Th., 9:30-10:30. Mr. Ogden

112. Old French. Mr. Hubert
Lectures and readings.

For Graduates Only

119b. Old Provençal. Mr. Ogden

Spanish

For Graduates and Undergraduates

Additional reading is required of graduates taking work in courses open to undergraduates also.

[108. Cervantes (*Don Quixote*) and Calderon.] Th., 4:00-6:00. Mr. Brown
Omitted in 1922-1923

122. Spanish Literature in the Sixteenth and Seventeenth Centuries.—Tu., 4:00-6:00. Mr. Brown

126. Old Spanish Readings.—Two hours weekly. Mr. Brown

[128. Contemporary Spanish Literature.] Two hours weekly. Mr. Brown
Prerequisite: Three years of college Spanish
Omitted in 1922-1923

Italian

For Graduates and Undergraduates

In the following courses additional reading is required of graduate students.

115. Italian Literature in the Nineteenth Century.—M., W., 10:30-11:30. Mr. ———

[117. Italian Prose Composition.] M., W., 10:30-11:30. Mr. ———
Conversation; commercial prose; composition.
Alternates with Course 115.
Omitted 1922-1923

119. Italian Renaissance.—Two hours weekly.
Dante: *Vita Nuova*; *Divina Commedia*; Petrarch: *Canzoniere.*

[121. Italian Chivalric Romance.] Two hours weekly.
Alternates with Course 119.
Tasso; Ariosto; Boiardo.
Omitted in 1922-1923

SOCIAL SCIENCE

For Graduates and Undergraduates

Graduate students entering courses open to undergraduates will be required to do additional work in order to secure full credit.

Courses 1a and 2b are prerequisite to the following courses; but advanced students who are at the same time enrolled in 1a and 2b will be admitted.

107a. The Family.—*First semester*, Tu., Th., 9:30-10:30. Mr. Eubank
The historical development of the Family, its social functions, and its present day aspects and problems.

108b. The Community.—*Second semester*, Tu., Th., 9:30-10:30. Mr. Eubank
An analysis of the Community as a social entity, with suggested methods of community study and interpretation, and an examination of agencies and programs for its development.

[109a. Dependency and its Social Treatment.]
Omitted in 1922-1923

[110b. Delinquency and its Social Treatment.]
Omitted in 1922-1923

111a. Social Legislation.—*First semester*, M., W., F., 10:30-11:30. Mr. Eubank
A study, largely from primary sources, of existing and proposed legislation.

112b. Racial Groups in America.—*Second semester*, M., W., F., 10:30-11:30. Mr. Eubank
The extent, characteristics and influence of the non-American population of the United States. Policies and programs of treatment.

Primarily for Graduates

Open to Seniors only by special arrangement with the instructor.

151a. Seminar.—*First semester*, M., 3:00-5:00. Mr. Eubank
Social Investigation.

152b. Seminar.—*Second semester*, M., 3:00-5:00. Mr. Eubank
A continuation of 151a.

For Graduates Only

150. Individual Research. Mr. Eubank
One or two credits according to the work elected.
The consent of the instructor is prerequisite.

ZOOLOGY

To pursue advanced courses in zoology, the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

Requirements for Degrees

To enter upon work for the degree of Master of Arts in zoology, students must have completed Courses 1, 2, 5, 17a, 18a, 13a, 14a, 19b, 20b, or their equivalents. (See Announcement of the College of Liberal Arts.) Courses under the heading "For Undergraduates and Graduates" may be counted as graduate subjects with full credit towards the degree of Master of Arts by students who have elected majors in other departments. The requirements for a higher degree, when zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 13, 14).

For Graduates and Undergraduates

110a. Microscopical Technique.—*First semester*, Tu., Th., 9:30-12:30. Mr. Wieman

110b. Cytology.—*Second semester*, Tu., Th., 9:30-12:30. Mr. Wieman

118a. COMPARATIVE ANATOMY OF VERTEBRATES.—*First semester*, M., W., 1:00-4:00. Mr. Day

120b. EMBRYOLOGY OF VERTEBRATES.—*Second semester*, M., W., 1:00-4:00. Mr. Day

129. ADVANCED ZOOLOGY.—Two or three credits.
Mr. Wieman, Mr. Day

Primarily for Graduates

131. RESEARCH. Mr. Wieman

132. SEMINARY.—One credit, W., 4:00. Mr. Wieman
Reading and discussions of papers in zoological journals.

REGISTRATION OF STUDENTS, 1921-1922

Abbreviations

Any one of the following abbreviations placed beside a student's name indicates that he is taking work in the college designated as well as in the college in which he is listed:

CC	College of Commerce
ELA	Evening Courses in the College of Liberal Arts
LA	College of Liberal Arts
LA—D&E	Day and Evening Courses in the College of Liberal Arts
MC	College of Medicine
TC	College for Teachers
EC	College of Engineering
CL	College of Law
G	Graduate School
D	Listed in more than one college

Hanna Fellow in Physics

Karbler, John Philip (*Physics*).....30 E. St. Clair St., and Vickery, O.
B. S., Heidelberg University, 1919

D. A. R. Fellow in American History

Scherl, Louise Dale.....2220 Monroe Ave., Norwood, O.
A. B., University of Cincinnati, 1921

Baldwin Fellows

Conover, Elmer G. (*Physics*).....Lebanon, N. J., and 1548 Ruth Ave.
A. B., Oberlin College, 1921

*Elliott, Adaline Hallock (*English*).....20 Ash St., Ludlow, Ky.
A. B., Miami University, 1908: *A. M., University of Cincinnati*, 1921

Eversull, Bess Marie (*Mathematics*).....414 McGregor Ave., Elmwood Place, O.
A. B., University of Cincinnati, 1921

Gudikunst, Earl Grover (*Political Science*)...820 Crosby St., Akron, O., and 32 Hollister St.
A. B., Municipal University of Akron, 1921

Maddock, Charlotte Landis (*Chemistry*).....2642 Stanton Ave.
A. B., University of Cincinnati, 1919; *A. M., ibid.*, 1921

Maddock, Stephen James (*Anatomy*).....1545 Ruth Ave.
A. B., University of Cincinnati, 1919

Oliver, Symmes Francis (*Physiology*).....2233 Park Ave.
A. B., University of Michigan, 1914; *M. D., University of Cincinnati*, 1918

Soller, Walter (*Mechanical Engineering*).....2415 Talbott Ave.
M. E., University of Cincinnati, 1917; *A. M., ibid*; 1921

Van Fleet, Henry Bellis (*Civil Engineering*.....752 E. Epworth Ave.
A. B., Harvard University, 1920

Walker, Robert Coulter (*Biochemistry*).....2515 Auburn Ave.
A. B., University of the South, 1915; *A. M., ibid.*, 1920

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*Deceased

University Scholars

INSTOCK, LOUIS (*Philosophy*) ..... 510 Union St.
A. B., University of Tennessee, 1916
OOK, WALTER ANDREW (*Chemistry*) ..... Fourth and Sycamore Sts., Hamilton, O.
A. B., University of Cincinnati, 1921
ART, HUMES H. W. (*Romance Languages*) ..... 3023 Bathgate St.
A. B., University of Cincinnati, 1918

Graduate Students

CKERSON, CLARA MONROE (*Education*) ..... 307 Grove Ave., Wyoming, O.
A. B., University of Cincinnati, 1918
LLEN, DOROTHY RUTH (*Chemistry*) ..... 1629 Lincoln Ave.
A. B., University of Cincinnati, 1921
NSHUTZ, GRACE THOMAS (*English*) ..... 3561 Paxton Rd.
A. B., Wilmington College, 1918
SHBROOK, HENRIETTE (*Romance Languages*) ..... 2 Hedgerow Lane
A. B., University of Cincinnati, 1920
XLINE, ELEANOR (*English*) ..... 8 The Priscilla Apts.
A. B., University of Cincinnati, 1921
ACHARACH, REBECCA (*English*) ..... The Rose Hill Apts.
A. B., Wellesley College, 1921
ACON, MARGARET REARDON (*Education*) ..... 2393 Kemper Lane
Ph. B., University of Chicago, 1904
AILEY, JESSIE MURRAY ..... The Glencoe Hotel
B. L., Ohio Wesleyan University, 1901
AKER, WILLIAMETTA (*Latin*) ..... 11 Twenty-first St., Newport, Ky.
A. B., University of Cincinnati, 1920
ARTLETT, RUHL JACOB (*History*) ..... 2329 Park Ave., Norwood, O.
A. B., Ohio University, 1920
ECKER, LILLIE (*Education*) ..... 707 Purcell Ave.
B. S., University of Cincinnati, 1919
EGHTEL, FLOYD ELDON (*Botany*) ..... 4901 Winton Rd
A. B., Indiana Central University, 1912; *A. M., Indiana University*, 1917
INGEL, ELLA J. (*Biochemistry*) ..... 124 Lyon St.
B. S., University of Cincinnati, 1918
INSTOCK, LOUIS (*Philosophy*) ..... 510 Union St.
A. B., University of Tennessee, 1916
OOKSTABER, PHILIP DAVID (*Philosophy*) ..... Louisville, Ky., and 501 Carplin Pl.
B. S., College of the City of New York, 1911; *A. M., Columbia University*, 1912
OONE, WALLACE WILLIAM (*Metallurgy*) ..... 1523 Dixmont Ave.
Ch. E., University of Cincinnati, 1919
RAAM, MAXIMILIAN (*Germanic Languages*) ..... 3449 Lyleburn Pl.
A. B., University of Cincinnati, 1906; *A. M., ibid.*, 1913
RILL, WALTER HENRY (*Mathematics*) ..... 1816 Duck Creek Rd.
A. B., University of Cincinnati, 1916
ROOKS, ALBERT NELSON (*Botany*) ..... 3655 Middleton Ave.
A. B., University of Cincinnati, 1921
ROWN, COOPER OTHNEIL (*Chemistry*) ..... Chattanooga, Tenn., and 2605 Hemlock St.
B. S., University of Chattanooga, 1919
USCH, GLADYS HELEN (*Latin*) ..... 271 Gilman Ave.
A. B., University of Cincinnati, 1920
UTTENWIESER, HILDA (*Latin*) ..... 252 Loraine Ave.
A. B., Bryn Mawr College, 1920; *A. M., University of Cincinnati*, 1921

CALVERT, HARRY HUDSON (*Education*) ..... 2513 Auburn Ave.
A. B., De Pauw University, 1913

CLARK, PAUL BURROUGHS (*Biblical Literature*) ..... 22 E. 26th St., Covington, Ky.
A. B., University of Cincinnati, 1919

CONOVER, ELMER GARRETT (*Physics*) ..... Lebanon, N. J., and 1548 Ruth Ave.
A. B., Oberlin College, 1921

COOK, WALTER A. (*Chemistry*) ..... Fourth and Sycamore Sts., Hamilton, O.
A. B., University of Cincinnati, 1921

CROUSE, ANNA MARIE (*English*) ..... 531 Terrace Ave.
A. B., Western College

DANIELS, VERNA CAROLYN (*Latin*) ..... 2434 Maplewood Ave.
A. B., University of Cincinnati, 1916

DAVIDSON, ALVINA (*English*) ..... 1242 First Ave.
A. B., University of Cincinnati, 1911

DAVIDSON, CHARLES LOWELL (*Education*) ..... 2145 Sinton Ave.
A. B., Yale University, 1907

DAVIS, HARRY E. (*Education*) ..... 1923 Delaware Ave., Norwood, O.
A. B., Wittenberg College, 1914

DEARNESS, DONALD FREDERICK (*Geology*) ..... 3492 Cheviot Ave.
A. B., University of Cincinnati, 1916

DISERENS, CHARLES MURDOCH (*Psychology*) ..... 3550 Evanston Ave.
A. B., University of Lebanon, 1915; *A. M., University of Cincinnati*, 1917

DOLAN, EDITH AGATHA (*English*) ..... 3981 Lowry Ave.
B. S., University of Cincinnati, 1919

DRACH, HARVEY EDWARD (*English*) ..... 2200 Auburn Ave.
A. B., University of Cincinnati, 1920; *A. M., ibid.*, 1921

DUNN, W. ROSS ..... 11 Harris Bldg., Norwood, O.
B. S., Ohio University, 1916

DURRELL, EDITH MEGRUE (*Chemistry*) ..... 3212 Beredith Pl.
A. B., Sweet Briar College, 1921

*ELLIOTT, ADALINE HALLOCK (*English*) ..... 20 Ash St., Ludlow, Ky.
A. B., Miami University, 1908; *A. M., University of Cincinnati*, 1921

ERMERT, HETTIE C. (*German*) ..... Eighth and Overton Sts., Newport, Ky.
A. B., University of Cincinnati, 1920

EVERSULL, BESS MARIE (*Mathematics*) ..... 414 McGregor Ave., Elmwood Place, O.
A. B., University of Cincinnati, 1921

FACKLER, CLARENCE WEBSTER (*Economics*) ..... 236 Loraine Ave.
A. B., Iowa State University, 1920

FEGER, HATTIE VIRGINIA (*Education*) [*ELA*] ..... 872 Wehrman Ave.
B. S., University of Cincinnati, 1921

FELD, JACOB (*Civil Engineering*) ... 582 Herkimer St., Brooklyn, N. Y., and 3348 Burnet Ave.
B. S., College of City of New York, 1918; *A. M., University of Cincinnati*, 1921

FEUSSE, ELMER GEORGE (*Physical Chemistry*) ..... 1906 Bigelow St.
A. B., University of Cincinnati, 1919; *A. M., ibid.*, 1920

FILLAGER, ELSIE LOUISE ..... 611 McKinney St., Dayton, Ky.

FLESSA, HERBERT LUTHER (*Education*) ..... 237 Emming St.
A. B., University of Cincinnati, 1912

FOOTE, HELEN ALLEE (*Philosophy*) ..... 31 The Park Apts.
A. B., University of Cincinnati, 1914

FORD, FLORENCE (*Chemistry*) ..... 61 Auburndale Pl.
A. B., University of Cincinnati, 1921

FOX, EDITH (*Botany*) ..... The Brookline Apts.
A. B., Wellesley College, 1904

FRASER, HELEN MORISON (*History*) [*ELA*] ..... 25 The Roanoke Apts.
A. B., Vassar College, 1919

FREIBERG, JOSEPH A. (*Biochemistry*) ..... 3577 Alaska Ave.
A. B., Harvard University, 1920

*Deceased

RY, LAURA MARIAN (*Romance Languages*) . . . . . 3678 Kendall Ave.
A. B., University of Cincinnati, 1920; *A. M., Columbia University*, 1921

RYE, THOMAS CRADDOCK (*Education*) . . . . . 2588 Ring Pl.
B. S., Berea College, 1915

USON, HENRY HARVEY (*Education*) . . . . . 1920 Garrard St., Covington, Ky.
B. S., University of Cincinnati, 1920

AMES, OTIS (*History*) . . . . . 4533 Hector Ave.
A. B., Ohio Wesleyan University, 1908

ASSMAN, HARRY WORD (*Education*) . . . . . 111 E. Auburn Ave.
A. B., Washington and Lee University, 1908

EETING, ANNA MAE (*History*) . . . . . Chillicothe, O., and 940 Elberon Ave.
B. S., Miami University, 1919

RAY, GEOFFREY ARTHUR (*Chemistry*) . . . . . 3537 Trimble Ave.
A. B., University of Cincinnati, 1902; *A. M., ibid.*, 1904

ROSSE, MARGARET (*Mathematics*) . . . . . 5123 Whetsel Ave.
A. B., University of Cincinnati, 1921

UDIKUNST, EARL GROVER (*Political Science*) . . . 820 Crosby St., Akron, O., and 32 Hollister St.
A. B., Municipal University of Akron, 1921

UELKER, HERBERT (*Education*) . . . . . 1015 Academy Ave.
A. B., University of Cincinnati, 1912

AEHNLE, ELMER CHRISTIAN (*Education*) . . . . . 830 York St.
A. B., University of Cincinnati, 1911

ALDI, JOHN EMIL (*Physiology*) . . . . . Ninth and Isabella Sts., Newport, Ky.
A. B., Mount St. Mary's College, 1917

ALL, RUTH ELIZABETH (*Education*) . . . . . 2614 Hemlock St.
A. B., University of Cincinnati, 1912

ARDISTY, IDOLETTA (*Education*) . . . . . 3811 Eastern Ave.
A. B., Indiana University, 1905

ARPER, BERTA B. (*English*) . . . . . 828 Maple Ave., Newport, Ky.
A. B., University of Cincinnati, 1919

ART, HUMES HOUSTON WHITTLESEY (*Romance Languages*) . . . . . 3023 Bathgate St.
A. B., University of Cincinnati, 1918

ECKERMANN, RUTH (*Education*) . . . . . 642 Monroe Ave., Newport, Ky.
A. B., University of Cincinnati, 1918

OLLOWAY, MARY KUGHLEY (*Romance Languages*) . . . . . 3252 Delaware Ave.
B. S., University of Cincinnati, 1919

OOKE, RUTH CATHERINE (*Education*) . . . . . 20 E. Eighth St.
A. B., University of Cincinnati, 1920

OTTENDORF, ELIZABETH (*Botany*) [*ELA*] . . . . . 810 Richmond St.
A. B., University of Cincinnati, 1919

OUK, RAYMOND A. (*English*) . . . . . 1114 Draper St.
A. B., Wittenberg College, 1911; *B. D., ibid.*, 1914; *A. M., ibid.*, 1914

NSKEEP, HAROLD ELWOOD (*English*) . . . . . 1023 Scott St., Covington, Ky.
A. B., University of Cincinnati, 1914

RWIN, NELLIE MILDRED (*Botany*) . . . . . 6405 Roe St.
A. B., University of Cincinnati, 1920

AACS, MOSES LEGIS (*Biochemistry*) . . . . . Delaware and Kosota Sts.
A. B., University of Cincinnati, 1921; *A. M., ibid.*, 1921

OHNSON, CHARLES WILLIAM (*Education*) . . . . . 3968 Regent Ave., Norwood, O.
B. S., University of Cincinnati, 1918

ULIAN, CORNELIO DATO (*Bacteriology*) . . . . . 1900 Taft Rd.
A. B., Ohio Wesleyan University, 1919

ARBLER, JOHN PHILIP (*Physics*) . . . . . Vickery, O., and 30 E. St. Clair St.
B. S., Heidelberg University, 1919; *A. M., University of Cincinnati*, 1921

ERSTING, EMMA SOPHIA (*Mathematics*) . . . . . 3936 Dickson Ave.
A. B., University of Cincinnati, 1904; *A. M., ibid.*, 1912

KNIGHT, HELEN SHERWOOD (*English*) ..... 4520 Erie Av
A. B., University of Cincinnati, 1920
KOHLER, LYDIA DOBLER (*German*) ..... 1421 Groesbeck Rd
A. B., Brown University, 1910
KRAUPNER, WILLIAM (*Mathematics*) ..... 4106 Sherwood Av
LA MAY, ETHEL ROBERTA (*Education*) ..... 5310 Ravenna S
A. B., University of Cincinnati, 1921
LEVINE, SARAH (*Education*) ..... 806 W. Seventh S
B. S., University of Cincinnati, 1921
LYLE, JOSEPH WILSON (*Education*) ..... 1014 Chapel S
B. S., Ohio University, 1914
MCNUTT, WALTER SCOTT (*Philosophy*) ..... 645 State Av
B. L., Arkansas Cumberland College, 1917; *A. B., University of Texas*, 1918; *A. M*
ibid., 1919.
MADDOCK, CHARLOTTE LANDIS (*Chemistry*) ..... 2642 Stanton Av
A. B., University of Cincinnati, 1919; *A. M., ibid.*, 1921
MADDOCK, STEPHEN JAMES (*Anatomy*) ..... 1545 Ruth Av
A. B., University of Cincinnati, 1919
MEYDER, MINNIE (*Education*) ..... 4235 Florida Av
B. S., University of Cincinnati, 1921
MURPHY, ADA MARGUERITE (*English*) ..... 4502 Hector Av
A. B., University of Cincinnati, 1907
MYNCHENBERG, GEORGE CARL, JR. (*Anatomy*) ..... 625 Crown S
A. B., Wittenberg College, 1920
OGEL, JACOB JESSE (*Chemistry*) ..... 3561 Wilson Av
A. B., University of Cincinnati, 1921
OSTER, EUGENE ARTHUR (*Chemistry*) ..... 2335 Muriel Cou
E. E., University of Cincinnati, 1915
OSTERBROCK, WILLIAM CARL (*Electrical Engineering*) ..... 3014 Scioto S
E. E., University of Cincinnati, 1918
OTTO, CARL EVERETT (*Chemistry*) ..... 1 Highway Ave., Covington, K
A. B., University of Cincinnati, 1916; *A. M., ibid.*, 1920
OXLEY, EDMUND HARRISON (*Philosophy*) ..... 728 W. Seventh S
B. D., Howard University, 1908; *S. T. B., Harvard University*, 1909
PERIN, KATE (*Geology*) ..... 4729 Peabody Av
A. B., University of Cincinnati, 1908
PHYTHIAN, MARGARET TAYLOR (*Romance Languages*) ..... Newport, K
A B., Agnes Scott College, 1916
PLUCKEBAUM, DOROTHY ELIZABETH (*Education*) ..... 4711 Loretta Av
A. B., University of Cincinnati, 1916
POSEY, JAMES SHERMAN (*Education*) ..... The Central Y. M. C.
A. B., Eureka College, 1921
RABENSTEIN, MATILDA AGNES (*English*) ..... 1218 Carolina Av
A. B., University of Cincinnati
REICHERT, VICTOR EMANUEL (*English*) ..... 2623 Eden Av
A. B., College of the City of New York, 1918; *B. L., Columbia University*, 1921
REYNOLDS, FRANK MARION (*Education*) ..... 4417 Kemper Ave., St. Bernard,
B. S., University of Lebanon, 1904; *A. M., Cedarville College*, 1911
RIBBINK, ALFRED (*Economics*) ..... 236 Loraine Av
B. S., Iowa State University, 1920
RIFFE, LAURA CASSIDY (*Latin*) ..... 513 Garrard St., Covington, K
A. B., University of Cincinnati, 1916
ROBERTS, NELLIE EDITH (*English*) [*ELA*] ..... 1810 Young S
A. B., Southwestern College, 1914
ROCKWELL, GEORGE EDMUND (*Bacteriology*) ..... 3464 Greenlawn Av
B. S., University of Cincinnati, 1921

OWE, ELSIE JORDAN (*Geology*) ..... 1643 Knowlton St.
B. S., University of Cincinnati, 1919
UGGLES, LILLIAN GRACE (*Latin*) ..... 2204 Fulton Ave.
A. B., University of Cincinnati, 1913
APP, NANNA ALBERTA (*English*) ..... 2371 Kemper Lane
A. B., Denison University, 1895
HERL, LOUISE DALE (*History*) ..... 2220 Monroe Ave., Norwood, O.
A. B. University of Cincinnati, 1921
HEUING, MINNA J. (*English*) ..... 1756 Hanfield St.
B. S., University of Cincinnati, 1920
HROEDER, ESTHER LYDIA (*Education*) ..... 425 Ridgeway Ave.
A. B., University of Cincinnati, 1915
ULLY, RICHARD EDWARD (*Philosophy*) ..... 326 Purcell Ave.
A. B., De Pauw University, 1910
IAFFER, HERBERT (*Economics*) ..... 1355 Cryer Ave.
A. B., University of Cincinnati, 1913; *LL. B., ibid.*, 1917; *B. S., ibid.*, 1920
IAFFER, SUSAN LEWIS (*History*) ..... 2260 Park Ave.
A. B., University of Cincinnati, 1917
SSON, DOROTHY (*Philosophy*) ..... 2551 Homestead Pl.
A. B., University of Cincinnati, 1920
UTZ, ELLA JEANETTE (*English* ..... Clovernook Home for Blind, Mt. Healthy, O.
A. B.. University of Cincinnati, 1920; *A. M., ibid.*, 1921
ITH, BENJAMIN FRANKLIN (*Philosophy*) ..... 426 Richmond St.
A. B., University of Cincinnati, 1920
ITH, INA KAY (*Education*) ..... 2224 Eastern Ave., Covington, Ky.
A. B., Kentucky State University, 1907
ITH, JOHN WESLEY (*Education*) ..... Williamsburg, O.
Pg. B., Valparaiso University, 1918; *A. B., Wilmington College*, 1920
LLER, WALTER (*Physics*) ..... 2415 Talbott Ave.
M. E., University of Cincinnati, 1917; *A. M., ibid.*, 1921
RIN, EUGENE (*Civil Engineering*) ..... 3396 Erie Ave.
M. E., University of Cincinnati, 1921
ORING, EDWARD FRANKLIN (*Education*) ..... Newport, Ky.
A. B., Wilmington College, 1920
EPHANS, DOROTHY MARIE (*Classics*) ..... 111 W. Fourth St., Covington, Ky.
A. B., University of Cincinnati, 1921
UERWALD, OLGA VIOLETT (*Education*) ..... 8333 Woodbine Ave.
A. B., University of Cincinnati, 1920
UNTZ, EDNA MARY (*English*) [*ELA*] ..... 2981 Observatory Ave.
B. S., University of Cincinnati, 1919
URWOLD, MARIE ANTOINETTE (*English*) ..... 1009 Academy Ave.
A. B., University of Cincinnati, 1918
LCOTT, CAROLYN RENNER (*English*) ..... 3892 Clifton Ave.
A. B., Wellesley College, 1917
IOMAS, MARGARET KEARSEY (*Philosophy*) ..... 2505 Gilbert Ave.
A. B., University of Cincinnati, 1916; *A. M., ibid.*, 1921
N FLEET, HENRY BELLIS (*Engineering*) ..... 752 E. Epworth Ave.
A. B., Harvard University, 1920
N WINKLE, EDWIN C. (*Education*) ..... 2231 Reading Rd.
B. S., Ohio University, 1913
ABNITZ, WILLIAM SEYMOUR (*English*) ..... 6809 Carthage Pike
A. B., Ohio State University, 1916
ACHS, ELENORE GLOVER (*Botany*) ..... 235 Hosea Ave.
A. B., University of Cincinnati, 1921
ALDMAN, BESSIE (*English*) ..... 5835 Hamilton Ave.
A. B., University of Cincinnati, 1915

WARMOTH, RAY (*Mathematics*) ..... 1929 Waverly Ave., Norwood, O.
A. B., Indiana State Normal School, 1917

WARNKING, MAY (*Education*) ..... 4792 Rapid Run Rd.
A. B., University of Cincinnati, 1911

WEATHERBY, JUANITA ALBERTA (*English*) ..... 4664 Hamilton Ave.
B. S., University of Cincinnati, 1919

WEIL, VALERIE M. (*Social Science*) ..... 2532 Highland Ave.
A. B., University of Cincinnati, 1902

WEITKAMP, HELEN (*Biochemistry*) ..... 757 McMakin Ave.
B. S., University of Cincinnati, 1921

WHITAKER, MARGARET HELEN (*Political Science*) [*ELA*] ..... 4419 Carnation Ave.
A. B., Smith College, 1918

WILLIAMS, CLYDE W. (*History*) ..... 407 Jackson St., St. Bernard, O.
Ph. B., Lebanon University, 1910; *A. B., Wilmington College*, 1920

WILLIAMS, KATHERINE MEREDITH (*English*) ..... 4425 Station Ave.
A. B., University of Cincinnati, 1915

WILLS, WALLACE W. (*Psychology*) ..... Racine, Wis., and 2605 Hemlock St.
A. B., Lawrence College, 1918

WILSON, ALICE ELIZABETH (*Latin*) ..... 2323 Ohio Ave.
A. B., University of Cincinnati, 1905

WILSON, MINNIE LOUISE (*Classics*) ..... 2323 Ohio Ave.
A. B., University of Cincinnati, 1902

WINSTON, JEAN (*Mathematics*) ..... R. F. D., No. 3, Latonia, Ky.
A. B., University of Cincinnati, 1921

WUEST, ALMA MARIE (*Mathematics*) ..... 158 W. McMillan St.
A. B., University of Cincinnati, 1915; *A. M., ibid.*, 1920

WURTZ, LOUISE B. (*English*) ..... 3025 Beekman St.
A. B., University of Cincinnati, 1904; *A. M., ibid.*, 1920

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